

EXPERT MEETING ON HYDRAULIC ENGINEERING

Danube Commission, Budapest

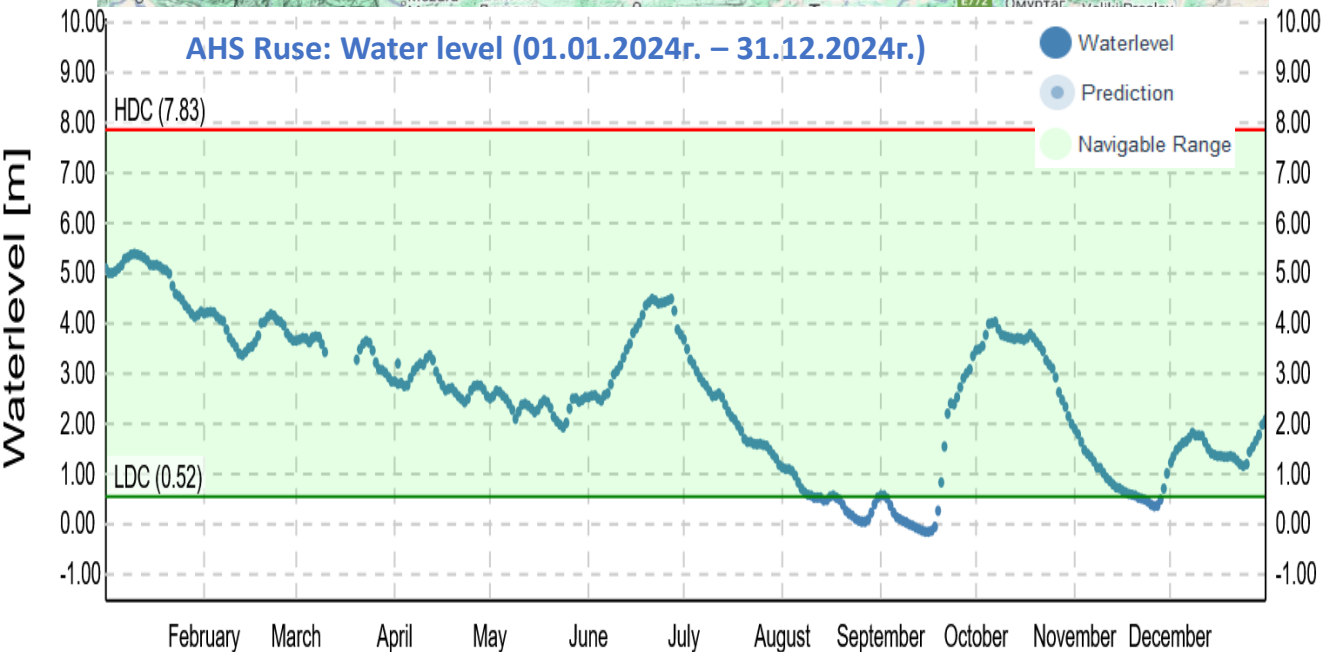
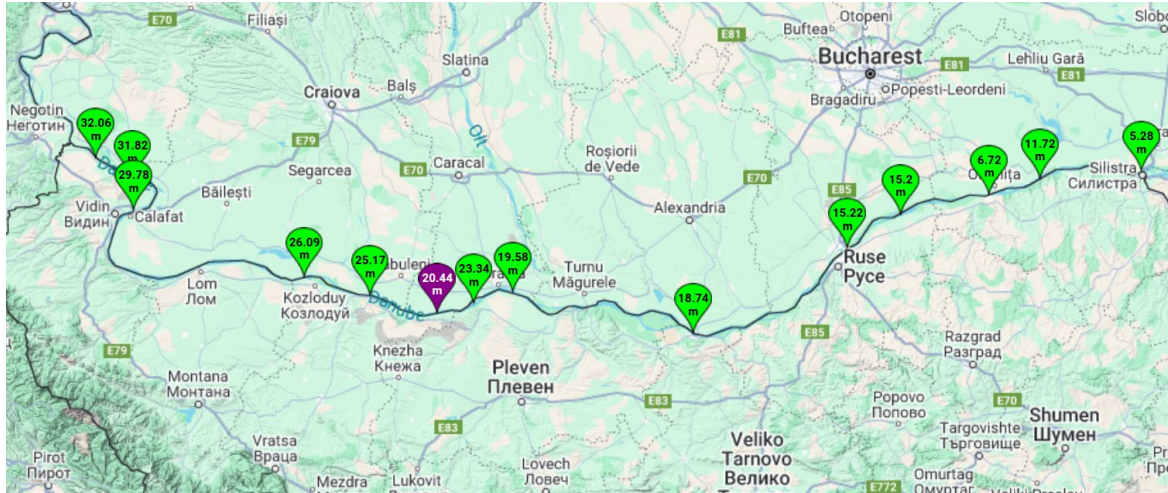
5th of March 2025



EXECUTIVE AGENCY
EXPLORATION AND MAINTENANCE OF THE
DANUBE RIVER

MONITORING, REHABILITATION AND MAINTENANCE ACTIVITIES IN 2024

Analysis of the hydrological and navigational conditions 2024



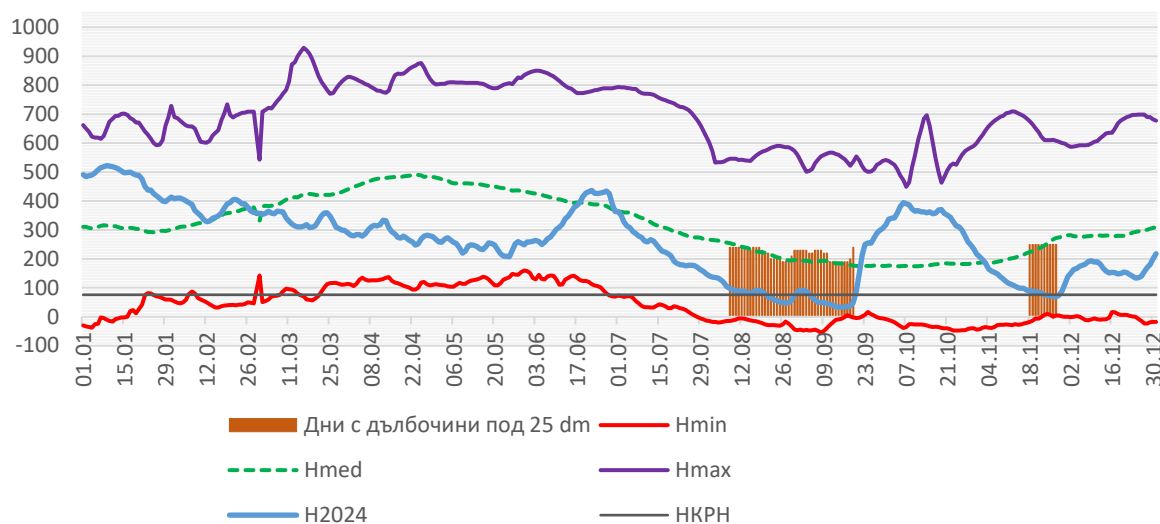
2024 began with relatively high water levels untypical for the period. A gradual decrease followed, with water levels below the average multi-annual norms observed from February to June. In June, an increase began, with levels reaching 428 cm at Svishtov gauging station. The spring high-water was absent. A gradual and permanent decrease in water levels began, with values below the LNWL on 21.08.2024.

In September an increase of water discharge, caused by the cyclone Boris in western and central Europe was recorded. After the outflow of the discharge from 23.11.2024, levels below the LNWL were observed again.

From a hydrological point of view 2024 can be considered normal to low-water, with 70% of the days having levels below the average multi-annual norms.

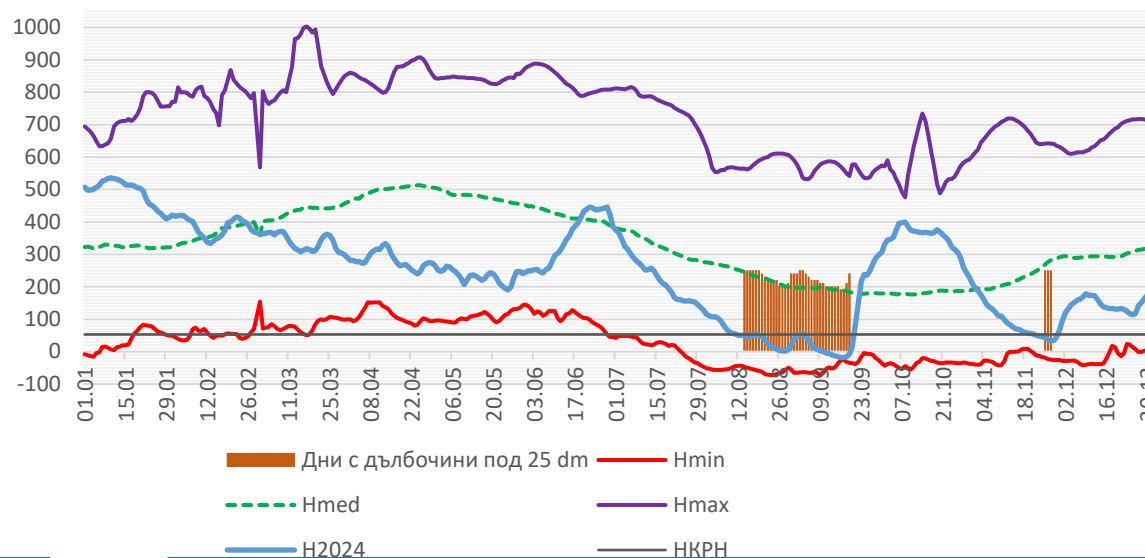
Water levels

Water levels in Svishtov, rkm 554.300 - 2024

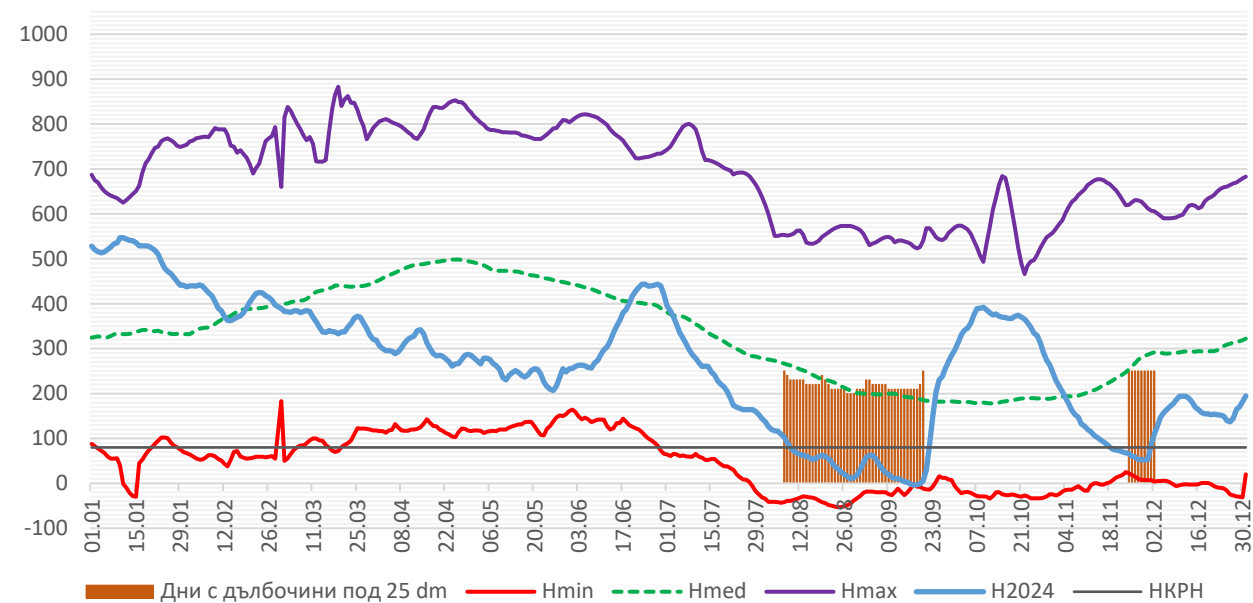


2024 г.	Number of days under ENR	Number of days with depths ≤ 25 dm	Min. water level	Mid.water level	Max. water level
Svishtov	31	53	33	260	522
Ruse	45	40	-18	251	536
Silistra	55	45	-4	283	547

Water levels in Ruse, rkm 495.600 - 2024



Water levels in Silistra, rkm 375.500 - 2024



Average daily and average monthly air temperatures:

Дата	Декември	Януари	Февруари
1	4.5	5.3	7.1
2	5.0	5.8	5.6
3	5.1	7.4	3.6
4	5.7	3.4	1.8
5	3.5	1.7	2.4
6	3.7	3.0	1.3
7	3.5	6.3	-0.1
8	5.9	11.3	-1.4
9	6.3	10.5	-2.3
10	4.6	8.1	-2.9
11	6.6	3.8	-2.2
12	5.0	0.5	-1.7
13	2.4	1.5	1.2
14	4.1	0.6	4.6
15	4.2	0.8	-0.2
16	6.5	0.9	0.3
17	11.0	3.2	-2.0
18	6.8	2.4	-2.6
19	6.0	2.3	-4.0
20	5.3	2.7	-6.9
21	4.3	3.5	-5.7
22	3.1	3.9	-6.7
23	1.4	8.8	-6.6
24	6.1	9.5	
25	4.3	7.2	
26	1.3	4.5	
27	0.9	7.2	
28	1.7	9.4	
29	2.6	10.3	
30	3.3	10.0	
31	-0.3	7.6	
Месец	Декември	Януари	Февруари
t min	-2.6	-3.8	-13.8
t med	4.3	5.2	-0.6
t max	16.2	19.9	12.8

Characteristics of the winter season 2024/2025 Hydro-meteo station Ruse

The winter of 2024/2025 for Ruse is relatively warm - with an average temperature for the season of 2.0°C, this winter it is 3.0°C.

The absolute minimal temperature is -13.8 °C, measured on 22.02.2025.

The absolute maximal temperature is 19.9 °C, measured on 29.01.2025.

The maximal amount of days with average negative daily temperatures is -34.3°C, with an average daily temperature of -3.8°C. The number of frosty days during the season is 35, and of icy days is 6.

Daily online meetings were held between EAEMDR and AFDJ in order to exchange information about the current navigational situation and the forecasts for water levels, weather forecasts, ice phenomena forecast as well as foreseen measures that should be taken preventively and in the event of critical situations.



The map displays the Danube river in Bulgaria, extending from the west near Turno Magurele to the east near VTS Silistra. It features numerous monitoring points marked with colored symbols (red squares, blue circles, green triangles) and numerical elevation values. Key locations labeled include Turno Magurele, Islaz, Bulgana, VTS Svishtov, Palets, Margaritsa, Belene, Belitsa, Svishtov, Ruse, Danube bridge, Ruse, Slobozia, Pirogovo, Pozharevo, Popina, Silistra, and Aydemir. The river is labeled 'Danube river' at several points. A central text box is overlaid on the map.

Re-verification of monitoring, rehabilitation and maintenance activities carried out in 2024

NAVIGATIONAL CONDITIONS

During 2024 in the common Bg-Ro stretch 25 bottlenecks were monitored.

For the sector between Ruse and Somovit limiting were the bottlenecks Belene isl. (rkm. 565.000 – 563.000), Vardim isl. (547.000 – 544.000) and Batin isl. (529.000 – 527.000), while for the sector between Ruse and Silistra limiting were the bottlenecks Vetren isl. and Chaika isl. (395.000 – 392.000 and 386.000 – 382.000)

Charts of all bottlenecks in the Bulgarian section (км. 374.10 – км. 610.00)



385.00 – 382.00
423.00 – 421.00
476.00 – 472.00
539.00 – 536.00
565.00 – 563.00

395.00 – 392.00
425.00 – 423.00
489.00 – 486.00
545.00 – 543.00
576.00 – 573.00

400.00 – 398.00
428.00 – 425.00
525.00 – 522.00
547.00 – 545.00
586.00 – 584.00

406.00 – 403.00
458.00 – 454.00
530.00 – 527.00
556.00 – 554.00
591.00 – 589.00

414.00 – 412.00
463.00 – 460.00
533.00 – 530.00
562.00 – 559.00
609.00 – 607.00

NAVIGATIONAL CONDITIONS

Fairway maintenance in the Bulgarian part of the river was performed by the marking vessel “Osam” and the surveying vessels “Rs 2070” and “Dunav-1”. While doing so more than 5 000 km were traveled by marking vessel “Osam” with usage of 200 days/year. The fairway optimization was implemented by maintenance of the navigational signals (floating and coastal), survey and on-time corrections of the fairway. During the year the marking system was secured by 165 floating signals, out of which 31 illuminated and 17 right river bank beacons.














Fairway corrections were made by:

- Mounting of floating signals 524
- Dismounting of floating signals 518
- Single-beam surveys 197
- Multi-beam surveys 65

The information is published on APPD’s web-site <https://appd-bg.org>

NAVIGATIONAL CONDITIONS

Navigation conditions

Locality	km	sign	distance from shore [m]		depth at sign(m)	coordinates		data
			left	right		latitude	longitude	
Silistra	375.30							2017-05-21
Silistra	382.00							2017-05-21
Silistra	382.10		240	520	7.00	44.1217500	27.1822666	2023-09-27
Chaika isl.	385.10		150	180	3.75	44.1369500	27.1580333	2024-09-04
Chaika isl.	385.80		220	860	2.90	44.1393333	27.1477333	2024-09-04
Aidemir	386.10		150	780	2.40	44.1406666	27.1420000	2024-09-04
Aidemir	387.00		460	290	5.20	44.1380166	27.1336000	2024-07-09
Aidemir	388.00							2017-05-21
Aidemir	388.00							2017-05-21
Aidemir	388.00							2017-05-21
Aidemir	388.00		340	320	6.80	44.1393833	27.1245166	2024-07-24
Aidemir	388.30					44.1364833	27.1190667	2016-07-14
Aidemir	388.90		330	380	6.00	44.13885	26.1149	2024-04-10

Coastal beacon	17
Illuminated buoys	31
Non - illuminated buoys	134
Bridge signalization	4
Other coastal signalization	223
Total:	409

Maximum number of navigational signals used during the period

For the last 3 years compared to the year 2024, the number of signals on the navigation conditions have increased by more than 20%, and from an average of 120 signals we reached 165 signals, 31 of which are illuminated.

MAINTENANCE ACTIVITIES



Number of single- and multibeam surveys

2024 (01.01 - 31.12.2024)		
	MB	SB
January	6	18
February	2	11
March	3	19
April	4	19
May	6	20
June	5	10
July	7	12
August	12	17
September	7	21
October	6	25
November	6	13
December	1	12
Total:	65	197

NAVIGATIONAL CONDITIONS

Hydrographic surveys

- 2024** → 65 locations with approx. area 60 938 731 m²
- 2023 → 54 locations with approx. area 68 591 569 m²;
- 2022 → 38 locations with approx. area 31 821 874 m²;
- 2021 → 59 locations with approx. area 55 039 626 m²;
- 2020 → 51 locations with approx. area 45 987 863 m²;
- 2019 → 36 locations with approx. area 33 658 225 m²;
- 2018 → 48 locations with approx. area 50 283 513 m²;
- 2017 → 25 locations with approx. area 11 070 000 m²;
- 2016 → 10 locations, SB-190 cross-profiles and 35 longitudinal profiles-616.31km;
- 2015 → 11 locations, SB-628 cross-profiles - 552 km;
- 2014 → 16 locations, SB-1 988 cross-profiles - 2 227.27 km;
- 2013 → 4 locations, SB-103 cross-profiles - 100 km.

MAINTENANCE ACTIVITIES

During the period the marking vessel “Osam” and the surveying vessels “Dunav-1” and “Rs 2070” performed 65 field trips in total

In 2024 the fairway trajectory changed on the following bottlenecks:

- rkm. 546.000 – rkm. 544.000 as of 25.01.2024;
- rkm. 545.000 – rkm. 542.000 as of 15.02.2024;
- rkm. 546.000 – rkm. 544.000 as of 17.04.2024;
- rkm. 388.000 – rkm. 385.000 as of 10.05.2024;
- rkm. 394.000 – rkm. 392.000 as of 30.05.2024;
- rkm. 546.000 – rkm. 544.000 as of 07.06.2024;
- rkm. 394.000 – rkm. 392.000 as of 17.08.2024;
- rkm. 565.000 – rkm. 563.000 as of 28.08.2024;
- rkm. 388.000 – rkm. 385.000 as of 04.09.2024;
- rkm. 394.000 – rkm. 392.000 as of 26.09.2024;
- rkm. 529.000 – rkm. 526.000 as of 11.10.2024;
- rkm. 529.000 – rkm. 525.000 as of 19.12.2024.

Fairway relocation at Vardim island (January 2024)

Критичен участък "остров Вардим" km 547.000 - 545.000 Bottleneck "Vardim isl." km 547.000 - 545.000

EXECUTIVE AGENCY
FOR EXPLORATION AND MAINTENANCE OF THE
DANUBE RIVER




Критичен участък: 547.000 rkm - 545.000 rkm
Bottleneck: 547.000 rkm - 545.000 rkm


Дата/Date:
30.11.2023

Дълбочините са редуцирани към "0" по пегела на п-ще Свищов
Depths are reduced to the "0" at gauge of Svishtov

Минимална ширина фарватер / Minimal width fairway: 140 m

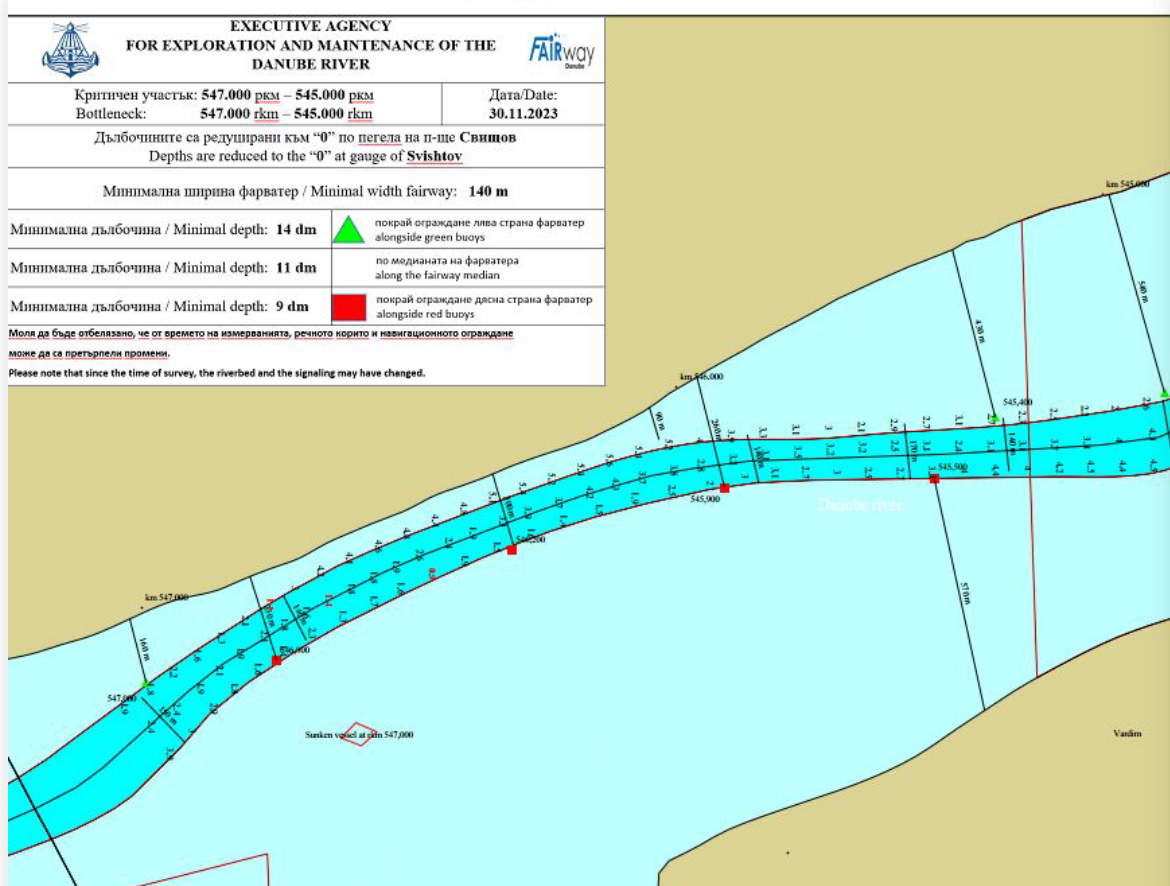
Минимална дълбочина / Minimal depth: 14 dm  покрай ограждане лява страна фарватер
alongside green buoys

Минимална дълбочина / Minimal depth: 11 dm по миданата на фарватера
along the fairway median

Минимална дълбочина / Minimal depth: 9 dm  покрай ограждане дясна страна фарватер
alongside red buoys

Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното ограждане
може да се промени.

Please note that since the time of survey, the riverbed and the signaling may have changed.



Критичен участък "остров Вардим" km 547.000 - 545.000 Bottleneck "Vardim isl." km 547.000 - 545.000

EXECUTIVE AGENCY
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DANUBE RIVER




Критичен участък: 547.000 rkm - 545.000 rkm
Bottleneck: 547.000 rkm - 545.000 rkm


Дата/Date:
06.02.2024

Дълбочините са редуцирани към "0" по пегела на п-ще Свищов
Depths are reduced to the "0" at gauge of Svishtov

Минимална ширина фарватер / Minimal width fairway: 180 m

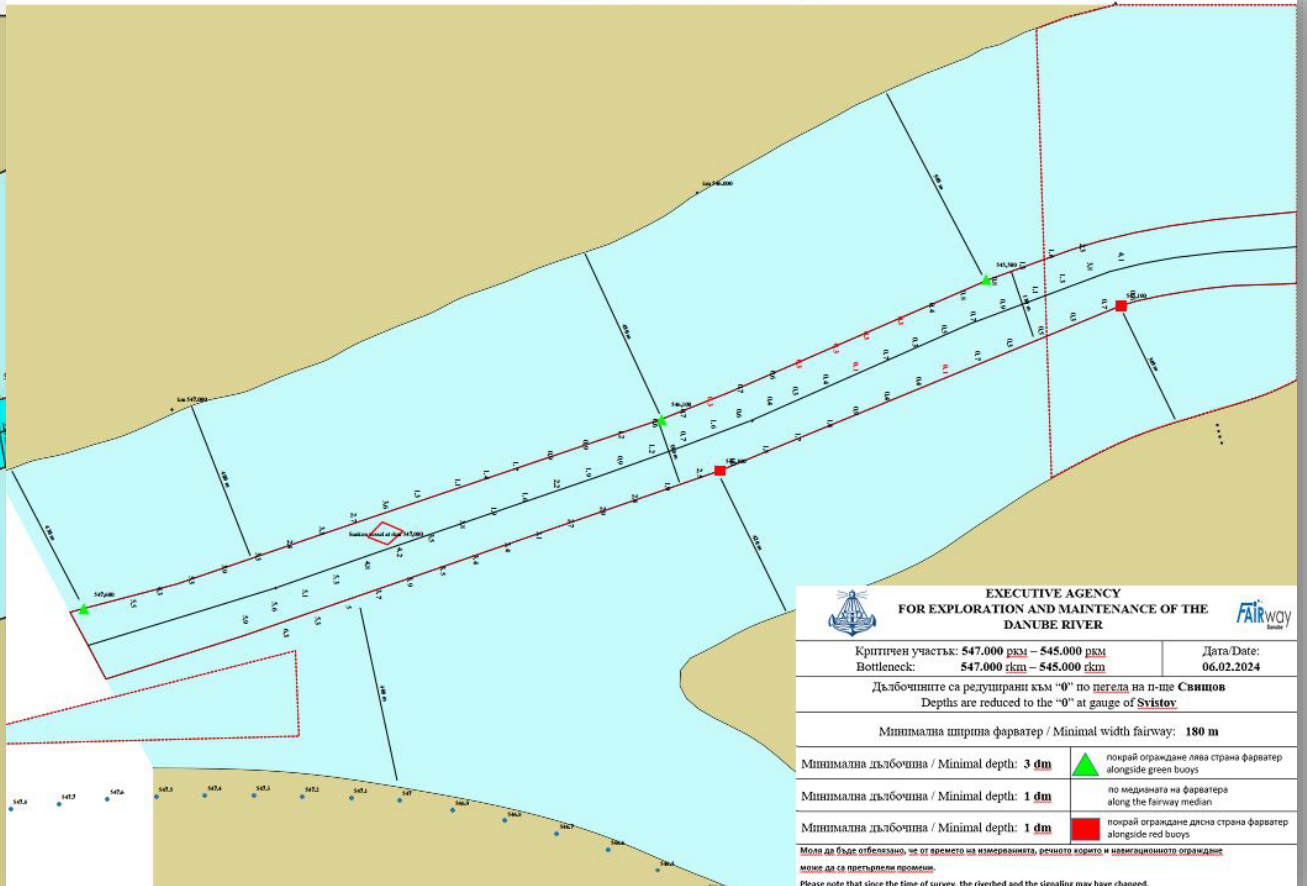
Минимална дълбочина / Minimal depth: 3 dm  покрай ограждане лява страна фарватер
alongside green buoys

Минимална дълбочина / Minimal depth: 1 dm по миданата на фарватера
along the fairway median

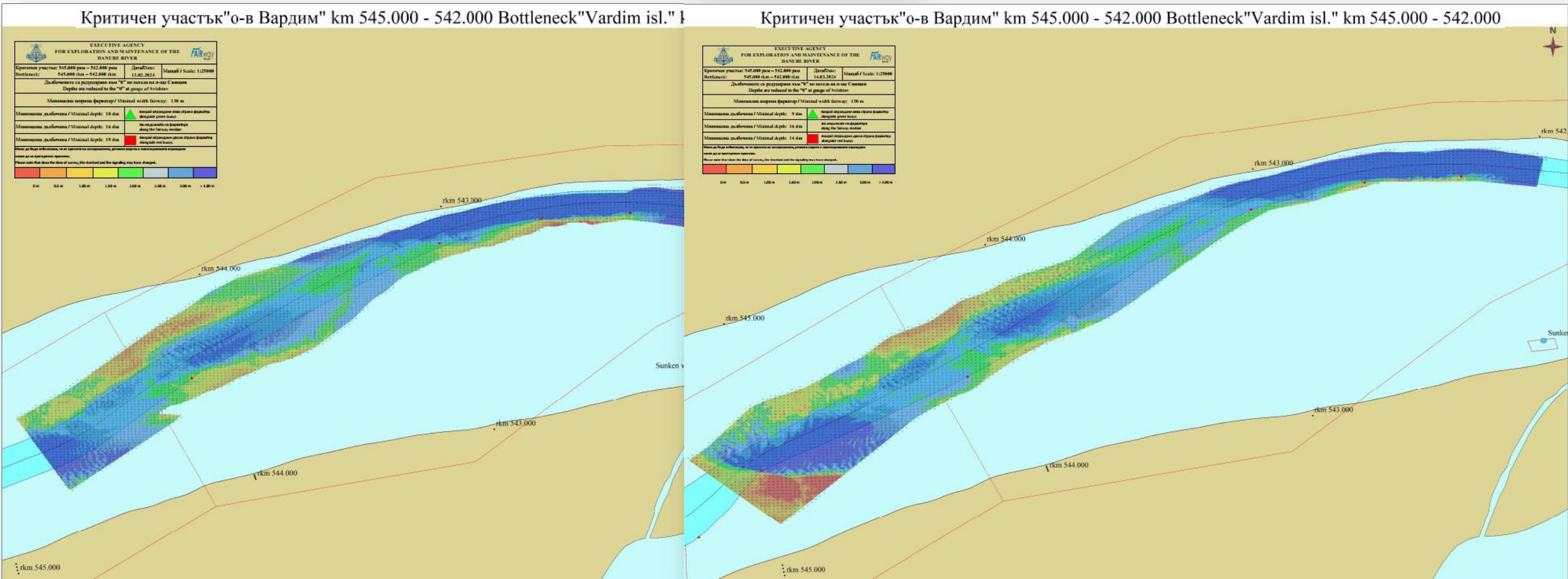
Минимална дълбочина / Minimal depth: 1 dm  покрай ограждане дясна страна фарватер
alongside red buoys

Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното ограждане
може да се промени.

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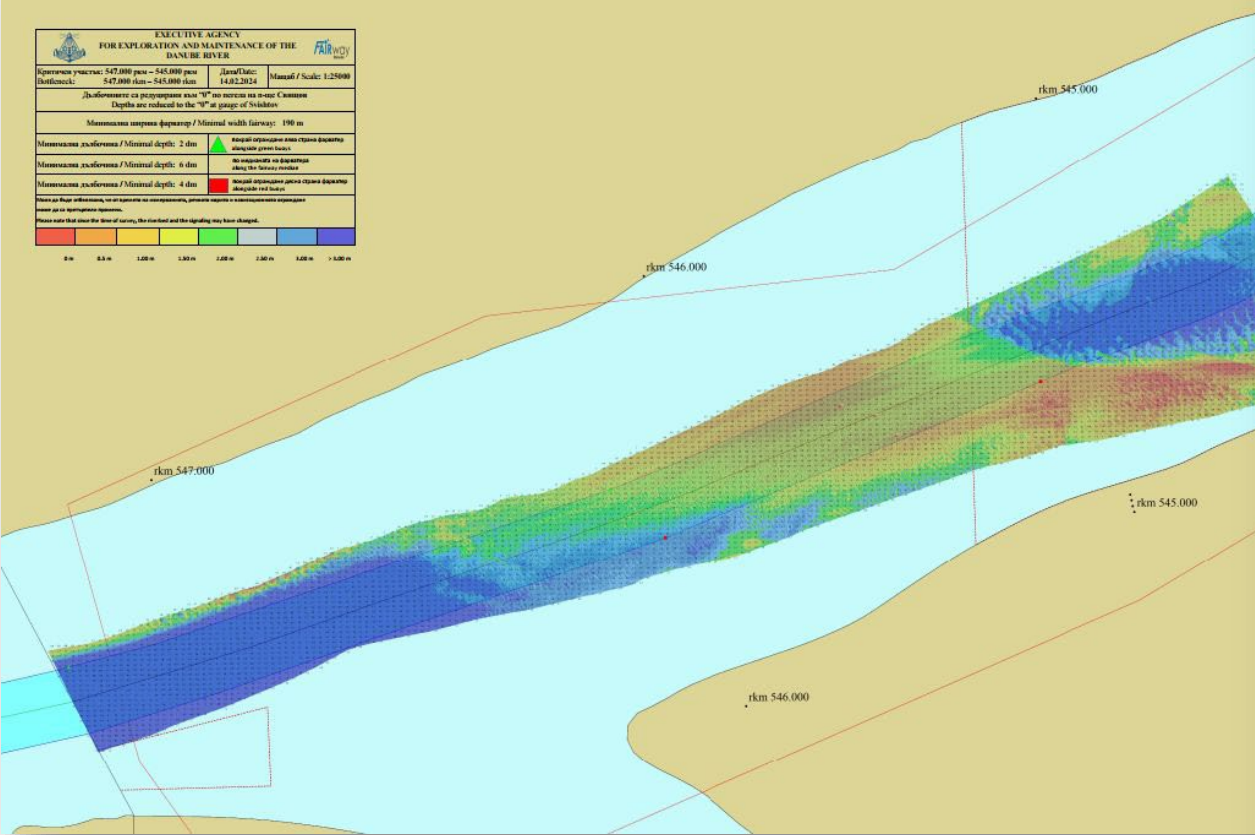
Fairway relocation at Vardim island (February 2024)



Fairway relocation at Vardim island (April 2024)

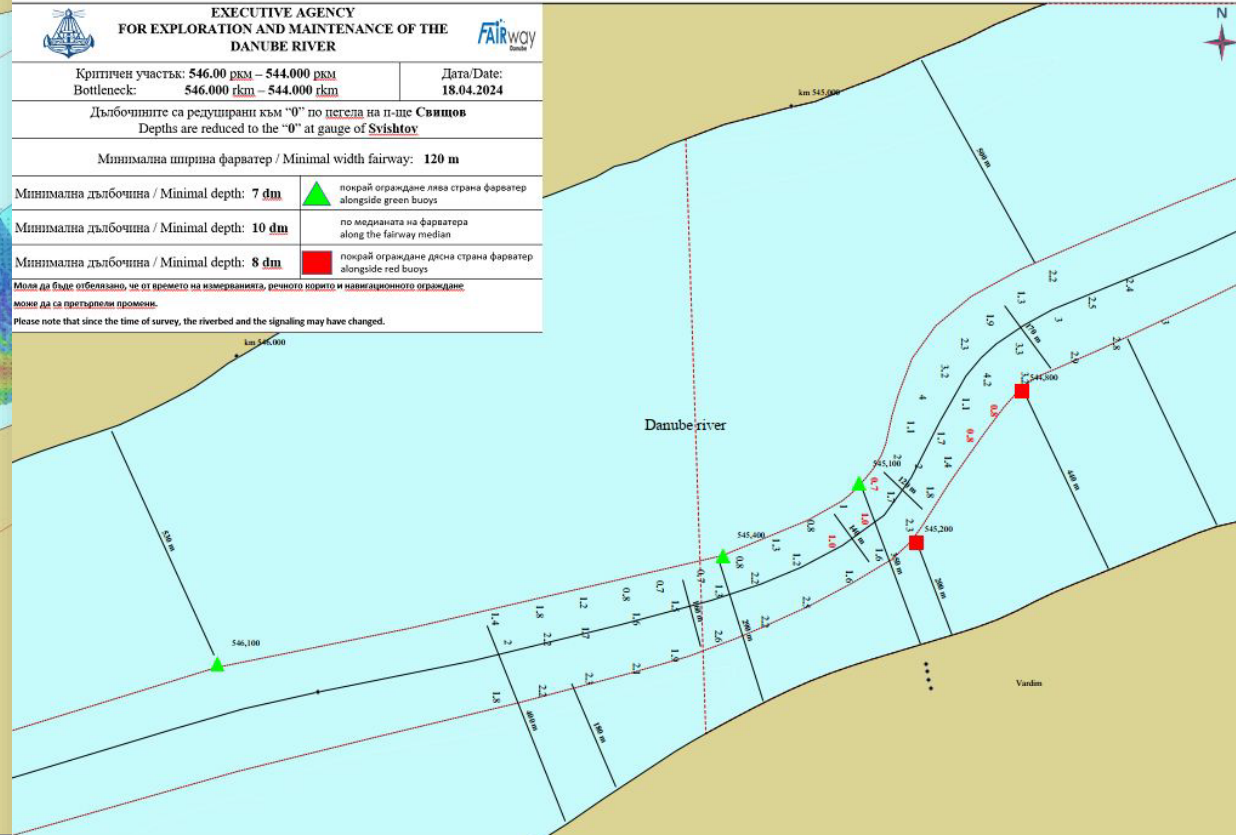
Критичен участък "о-в Вардим" km 547.000 - 545.000 Bottleneck "Vardim isl." km 547.000 - 545.000

EXECUTIVE AGENCY FOR EXPLORATION AND MAINTENANCE OF THE DANUBE RIVER	
Критичен участък: 547.000 rkm - 545.000 rkm	Дата/Date: 14.02.2024
Bottleneck: 547.000 rkm - 545.000 rkm	Масштаб / Scale: 1:25000
Дълбочините са редуцирани към "0" по нивото на н-ше Свищов Depths are reduced to the "0" at gauge of Svishtov	
Минимална ширина фарватер / Minimal width fairway: 190 m	
Минимална дълбочина / Minimal depth: 2 dm	покрай ограждане лява страна фарватер alongside green buoys
Минимална дълбочина / Minimal depth: 6 dm	по медианата на фарватера along the fairway median
Минимална дълбочина / Minimal depth: 4 dm	покрай ограждане дясна страна фарватер alongside red buoys
Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното ограждане може да са претърпели промени. Please note that since the time of survey, the riverbed and the signaling may have changed.	



Критичен участък "Остров Вардим" rkm 546.000 - rkm 544.000 Bottleneck "Vardim isl." rkm 546.000 - rkm 544.000

EXECUTIVE AGENCY FOR EXPLORATION AND MAINTENANCE OF THE DANUBE RIVER	
Критичен участък: 546.00 rkm - 544.000 rkm	Дата/Date: 18.04.2024
Bottleneck: 546.000 rkm - 544.000 rkm	
Дълбочините са редуцирани към "0" по нивото на п-ше Свищов Depths are reduced to the "0" at gauge of Svishtov	
Минимална ширина фарватер / Minimal width fairway: 120 m	
Минимална дълбочина / Minimal depth: 7 dm	покрай ограждане лява страна фарватер alongside green buoys
Минимална дълбочина / Minimal depth: 10 dm	по медианата на фарватера along the fairway median
Минимална дълбочина / Minimal depth: 8 dm	покрай ограждане дясна страна фарватер alongside red buoys
Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното ограждане може да са претърпели промени. Please note that since the time of survey, the riverbed and the signaling may have changed.	



Fairway relocation at Chayka island (May 2024)

Критичен участък "остров Чайка" ркм: 387.000 - ркм: 385.000 Bottleneck: "Chayka isl." rkm: 387.000 - rkm: 385.000



EXECUTIVE AGENCY
FOR EXPLORATION AND MAINTENANCE OF
DANUBE RIVER

Критичен участък: 387.00 ркм – 385.000 ркм
Bottleneck: 387.000 rkm – 385.000 rkm

Дълбочините са редуцирани към "0" по щета на п-ще С
Depths are reduced to the "0" at gauge of Silistra

Минимална ширина фарватер / Minimal width fairway:

Минимална дълбочина / Minimal depth: 16 dm покрай оградни
alongside green buoys

Минимална дълбочина / Minimal depth: 16 dm по медианата на
along the fairway

Минимална дълбочина / Minimal depth: 11 dm покрай оградни
alongside red buoys

Моля да бъде обелязано, че от времето на измерването, речното корито и навигационното
може да са претърпели промени.
Please note that since the time of survey, the riverbed and the signaling may have changed.

Критичен участък "остров Чайка" ркм: 388.000 - ркм: 385.000 Bottleneck: "Chayka isl." rkm: 388.000 - rkm: 385.000



EXECUTIVE AGENCY
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DANUBE RIVER



Критичен участък: 388.00 ркм – 385.000 ркм
Bottleneck: 388.000 rkm – 385.000 rkm

Дата/Date:
10.05.2024

Дълбочините са редуцирани към "0" по щета на п-ще Силестра
Depths are reduced to the "0" at gauge of Silistra

Минимална ширина фарватер / Minimal width fairway: 150 m

Минимална дълбочина / Minimal depth: 23 dm покрай оградни
alongside green buoys

Минимална дълбочина / Minimal depth: 19 dm по медианата на фарватера
along the fairway median

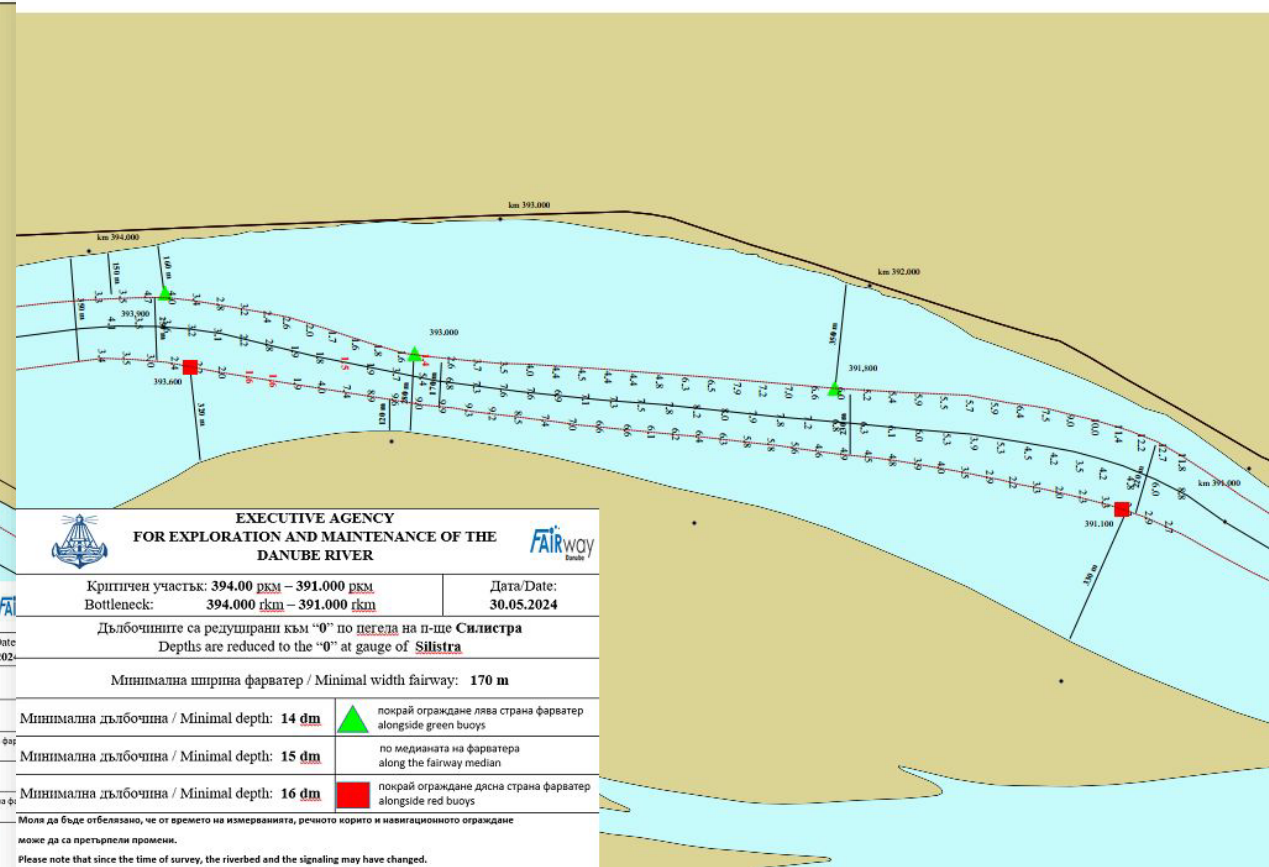
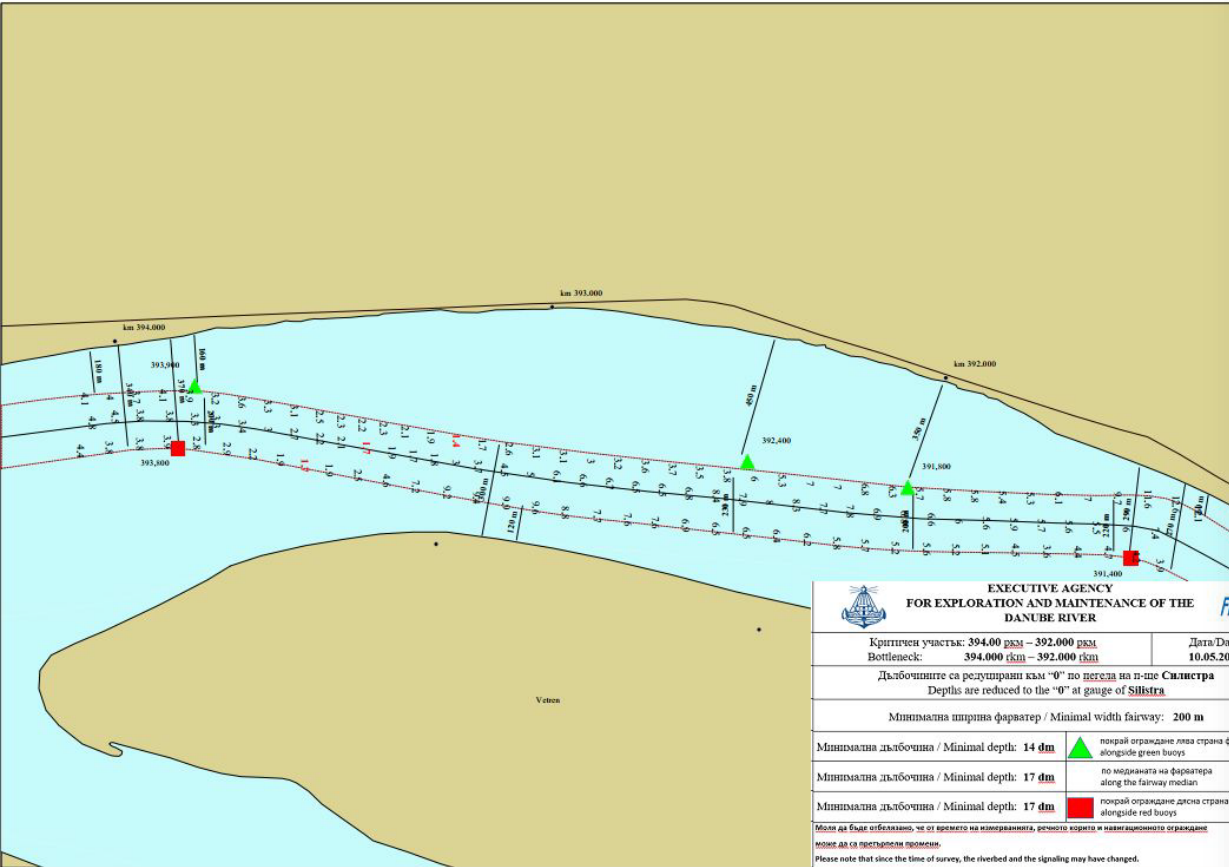
Минимална дълбочина / Minimal depth: 19 dm покрай оградни
alongside red buoys

Моля да бъде обелязано, че от времето на измерването, речното корито и навигационното
може да са претърпели промени.
Please note that since the time of survey, the riverbed and the signaling may have changed.

Fairway relocation at Vetren island (May 2024)

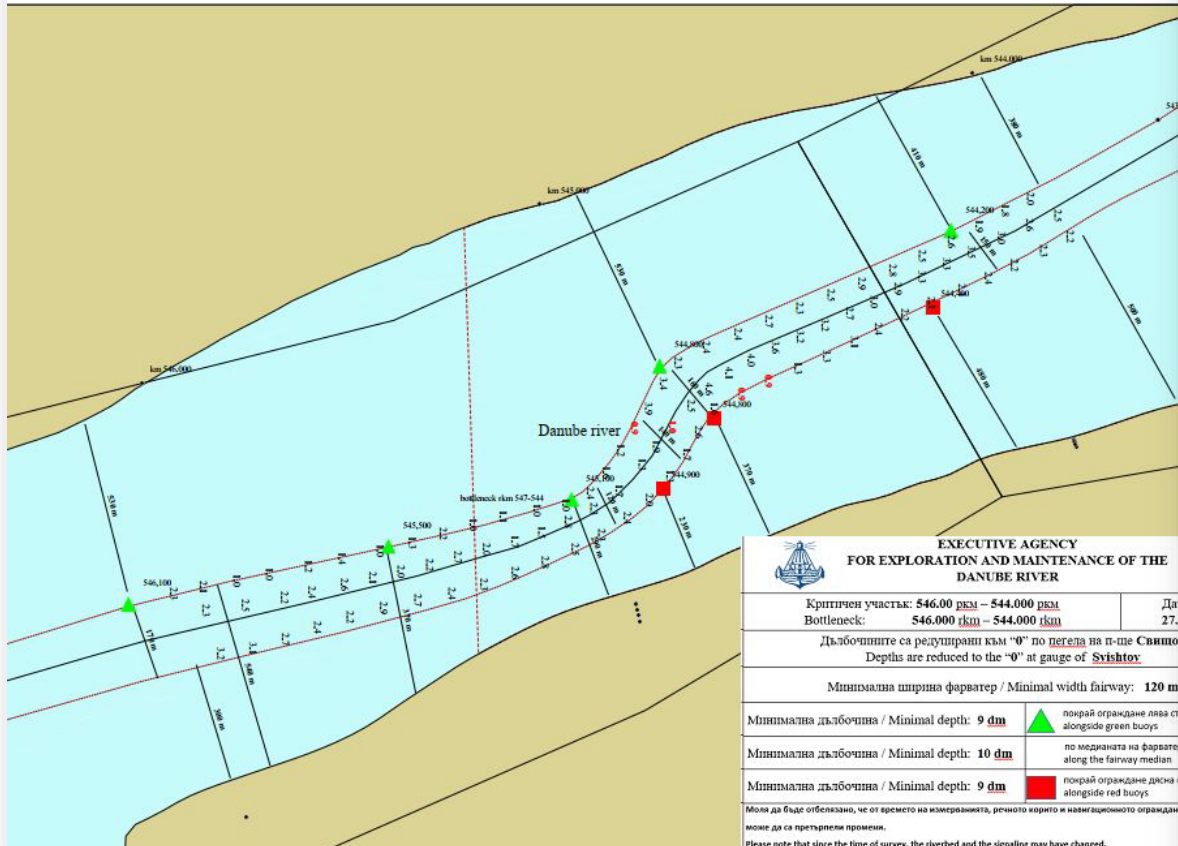
Критичен участък "Остров Ветрен" ркм. 394.000 - ркм. 392.000 Bottleneck: "Vetren isl." rkm. 394.000 - rkm. 392.000

Критичен участък "Остров Ветрен" ркм. 394.000 - ркм. 391.000 Bottleneck: "Vetren isl." rkm. 394.000 - rkm. 391.000

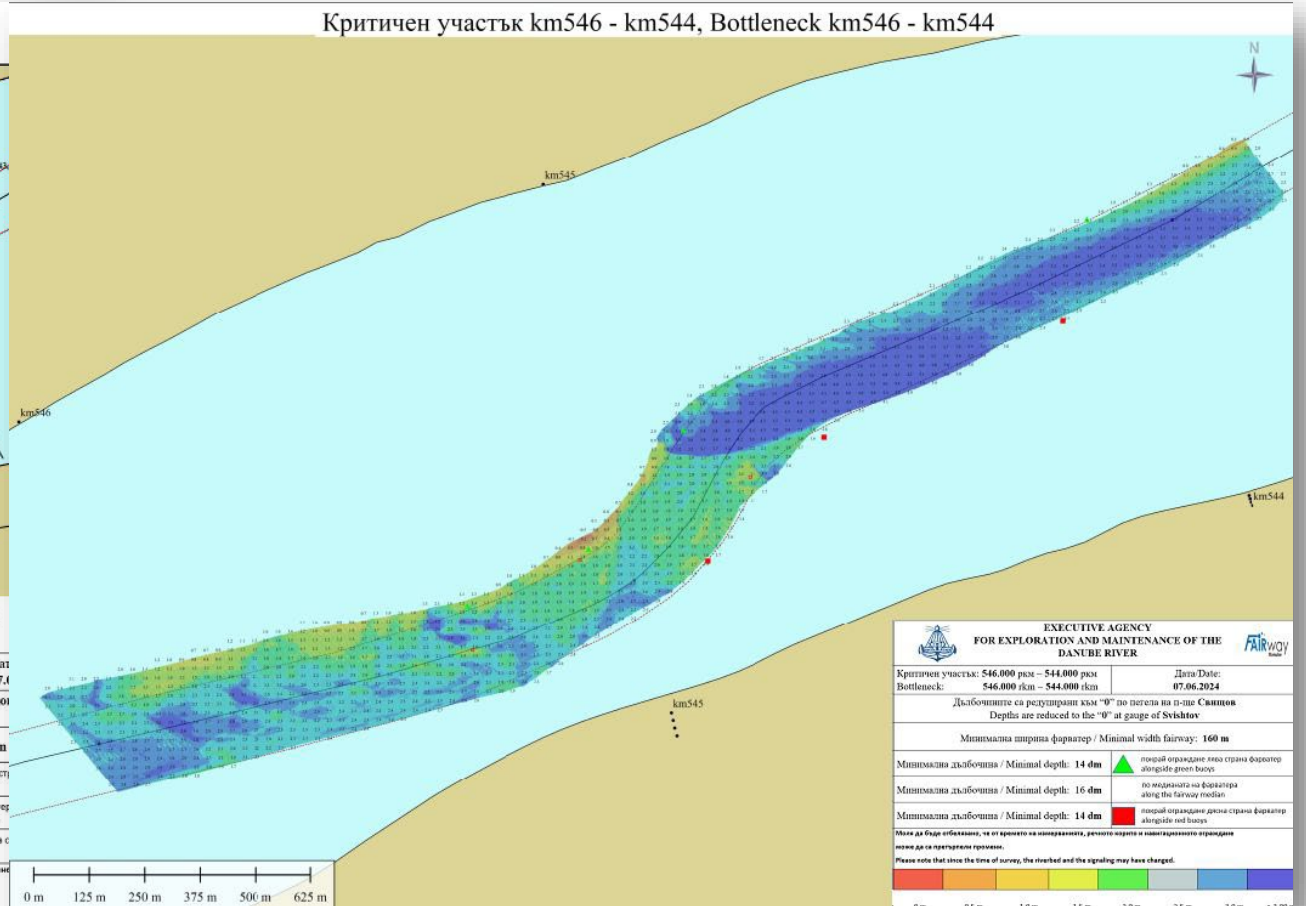


Fairway relocation at Vardim island (June 2024)

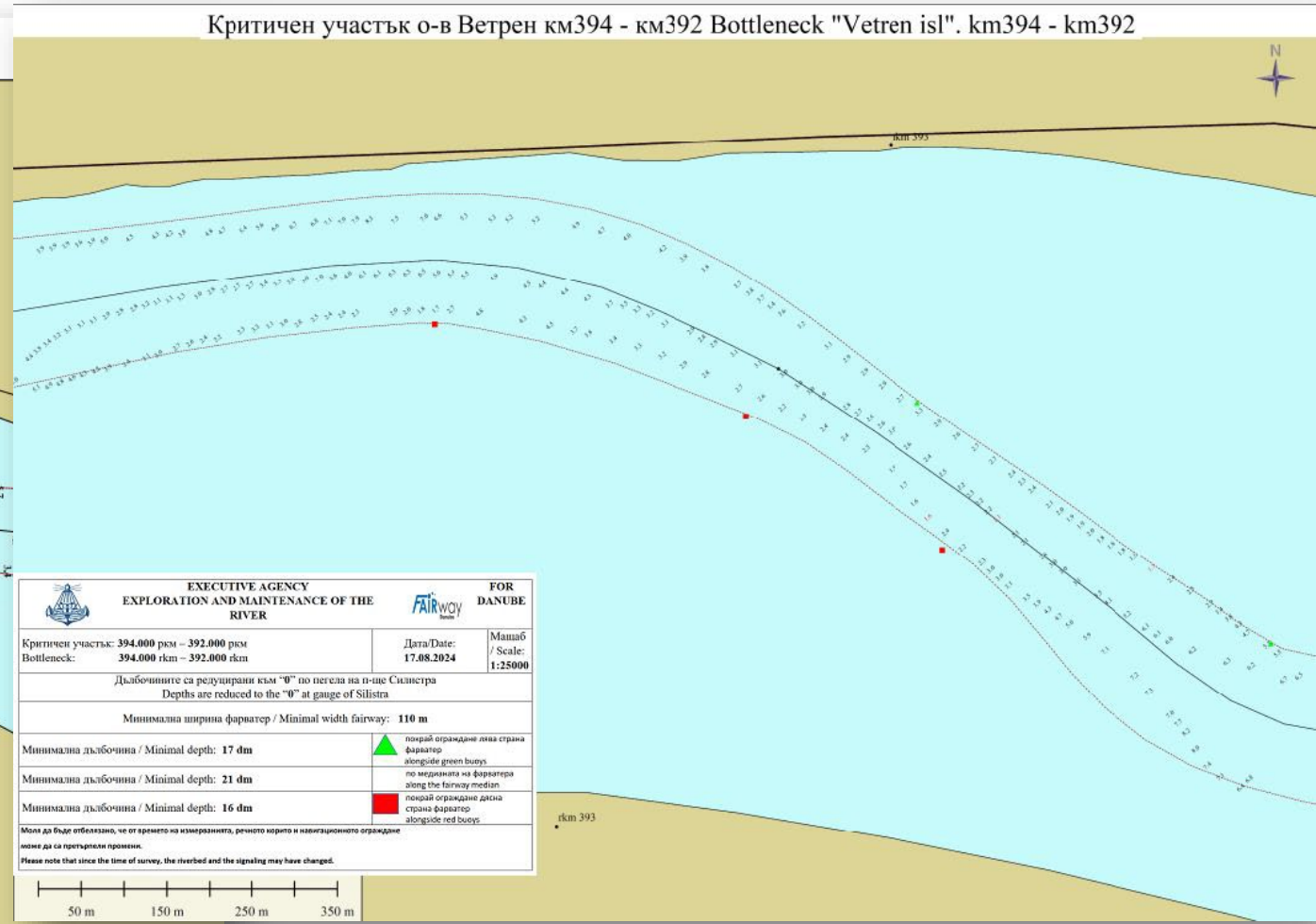
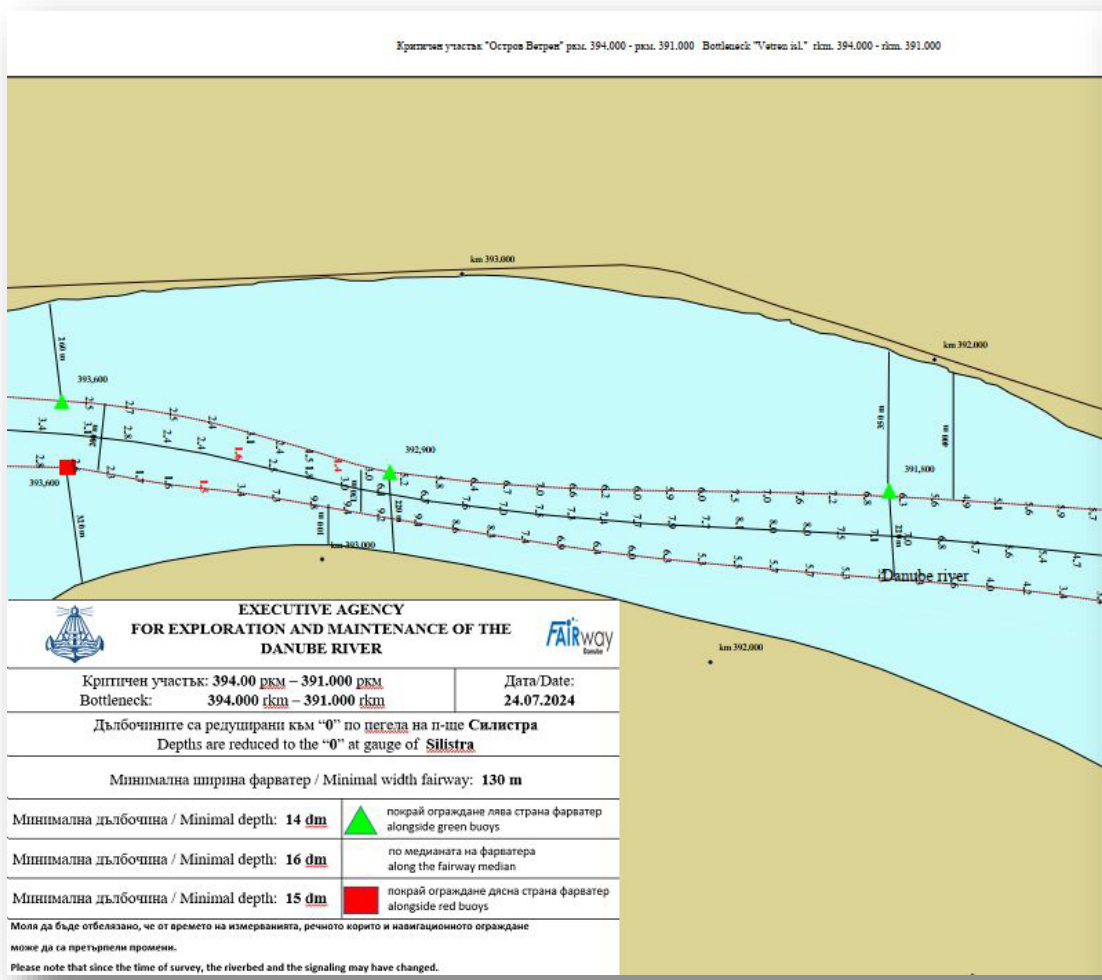
Критичен участък "Остров Върдим" разс. 546.000 - разс. 544.000 Bottleneck "Vardim isl." rlm. 546.000 - rlm. 544.000



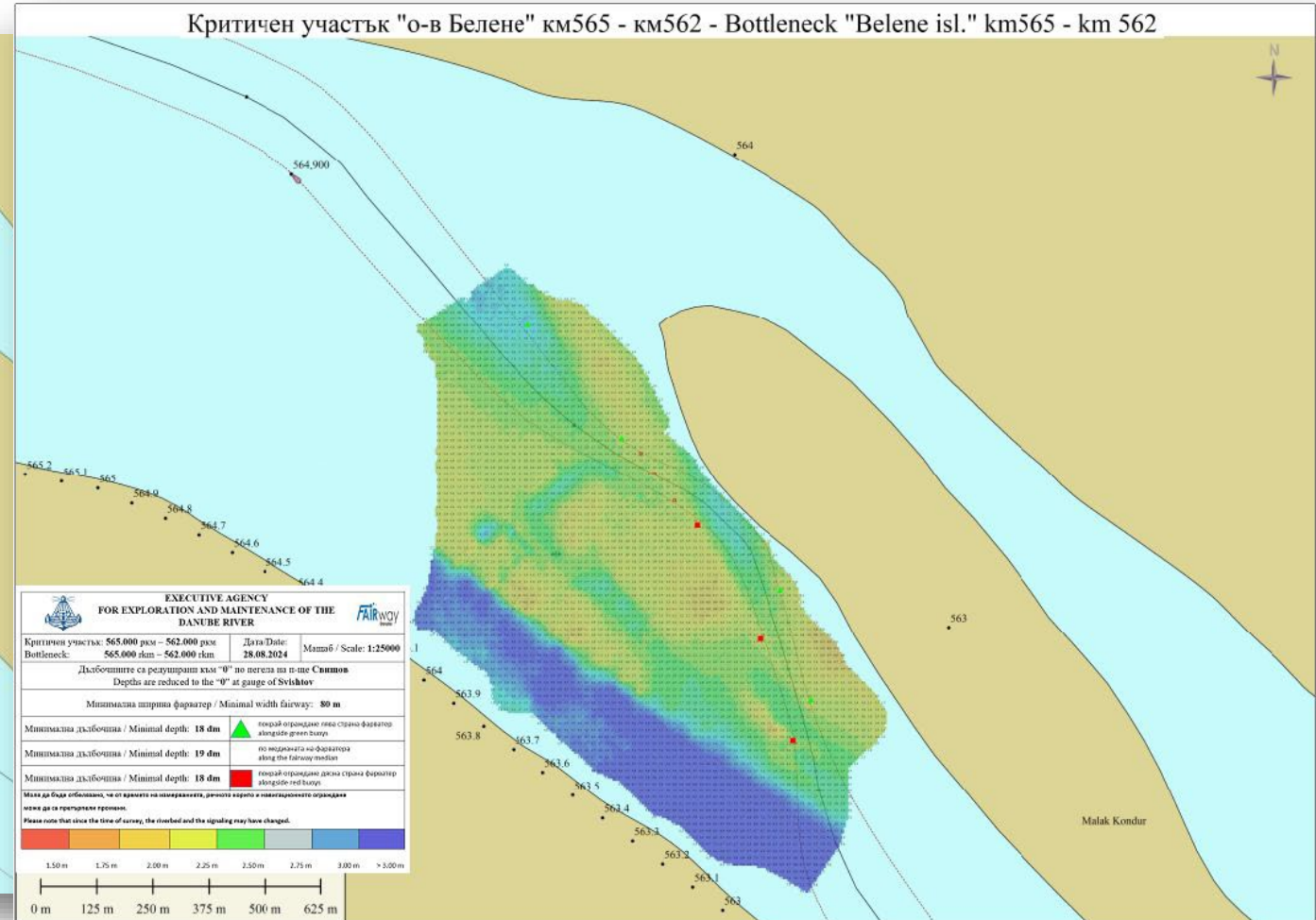
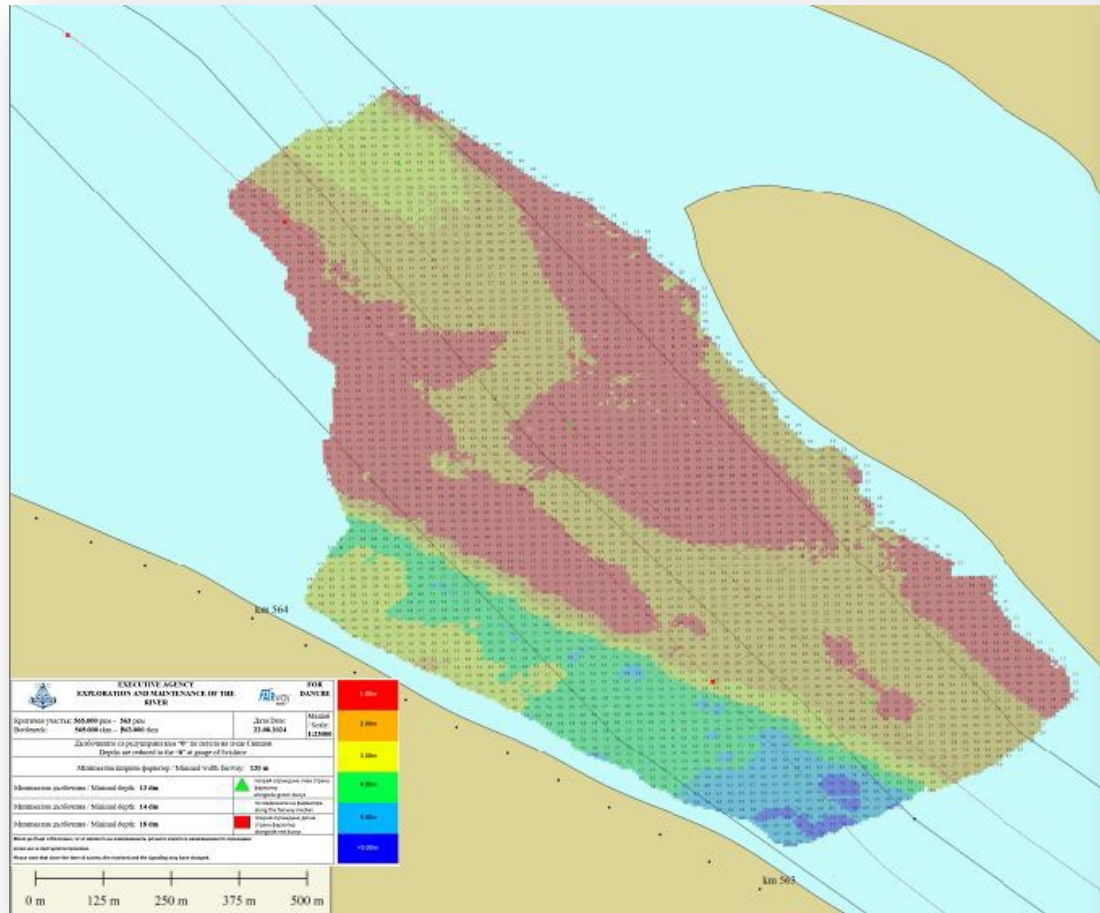
Критичен участък km546 - km544, Bottleneck km546 - km544



Fairway relocation at Vetren island (August 2024)

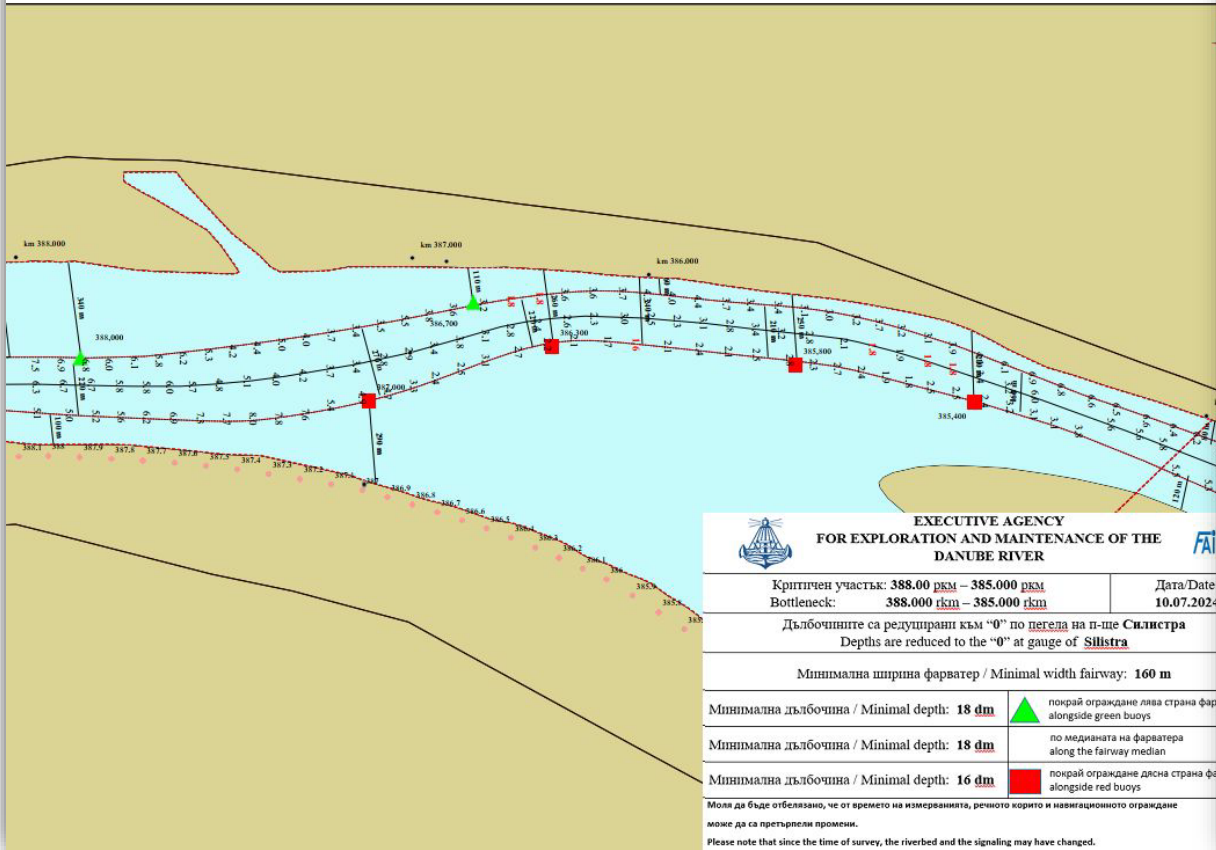


Fairway relocation at Belene island (August 2024)



Fairway relocation at Belene island (September 2024)

Критичен участък "остров Чайка" ркм. 388.000 - ркм. 385.000 Bottleneck "Chaika isl." rkm. 388.000 - rkm. 385.000

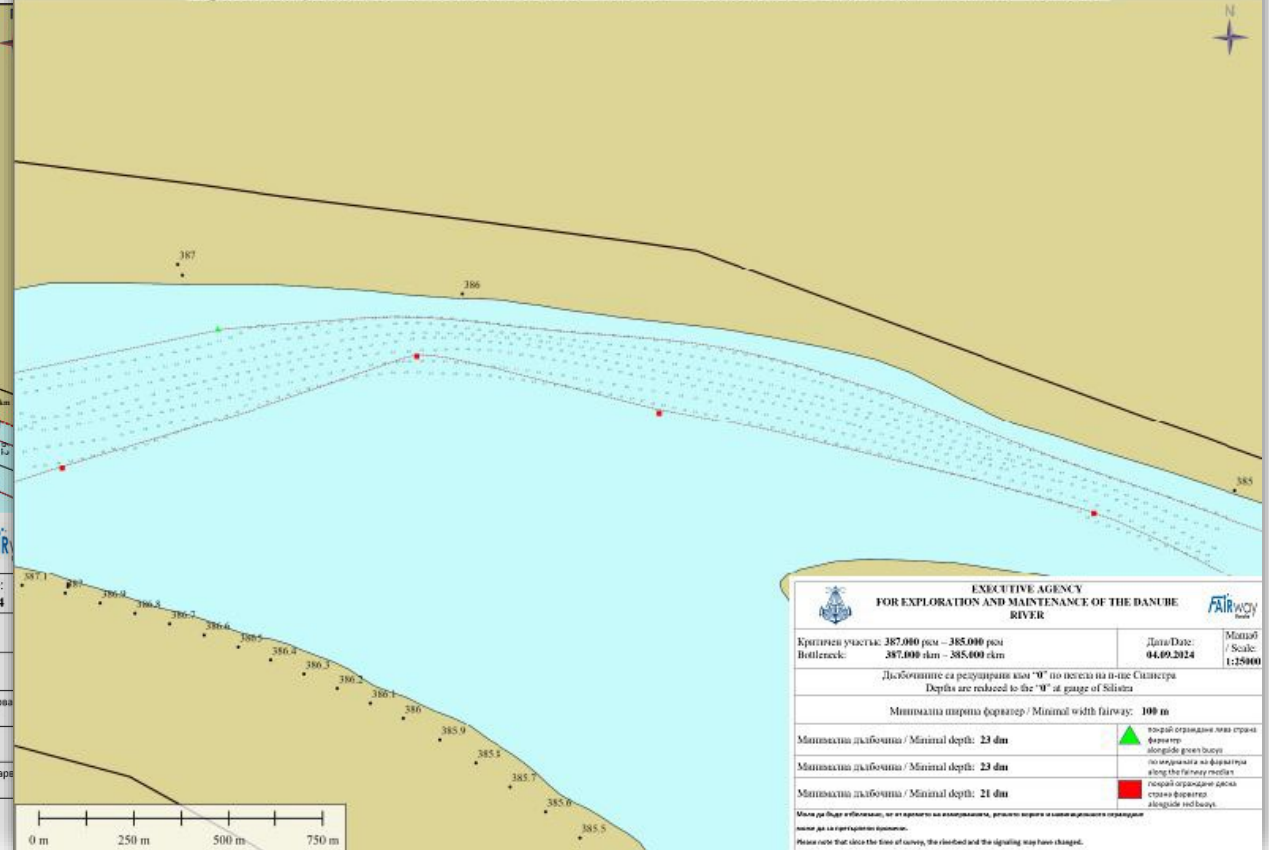


**EXECUTIVE AGENCY
FOR EXPLORATION AND MAINTENANCE OF THE
DANUBE RIVER**

Критичен участък: 388.000 ркм – 385.000 ркм	Дата/Date: 10.07.2024
Bottleneck: 388.000 rkm – 385.000 rkm	
Дълбочините са редуцирани към "0" по нивела на п-ще Силистра Depths are reduced to the "0" at gauge of Silistra	
Минимална ширина фарватер / Minimal width fairway: 160 m	
Минимална дълбочина / Minimal depth: 18 dm	покрай оградане лева страна фарватер alongside green buoys
Минимална дълбочина / Minimal depth: 18 dm	по медианата на фарватера along the fairway median
Минимална дълбочина / Minimal depth: 16 dm	покрай оградане десна страна фарватер alongside red buoys

Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното оградане може да са претърпели промени.
Please note that since the time of survey, the riverbed and the signaling may have changed.

Критичен участък "о-в Чайка км387 - км385 - Bottleneck "Chaika isl." км387 - км385

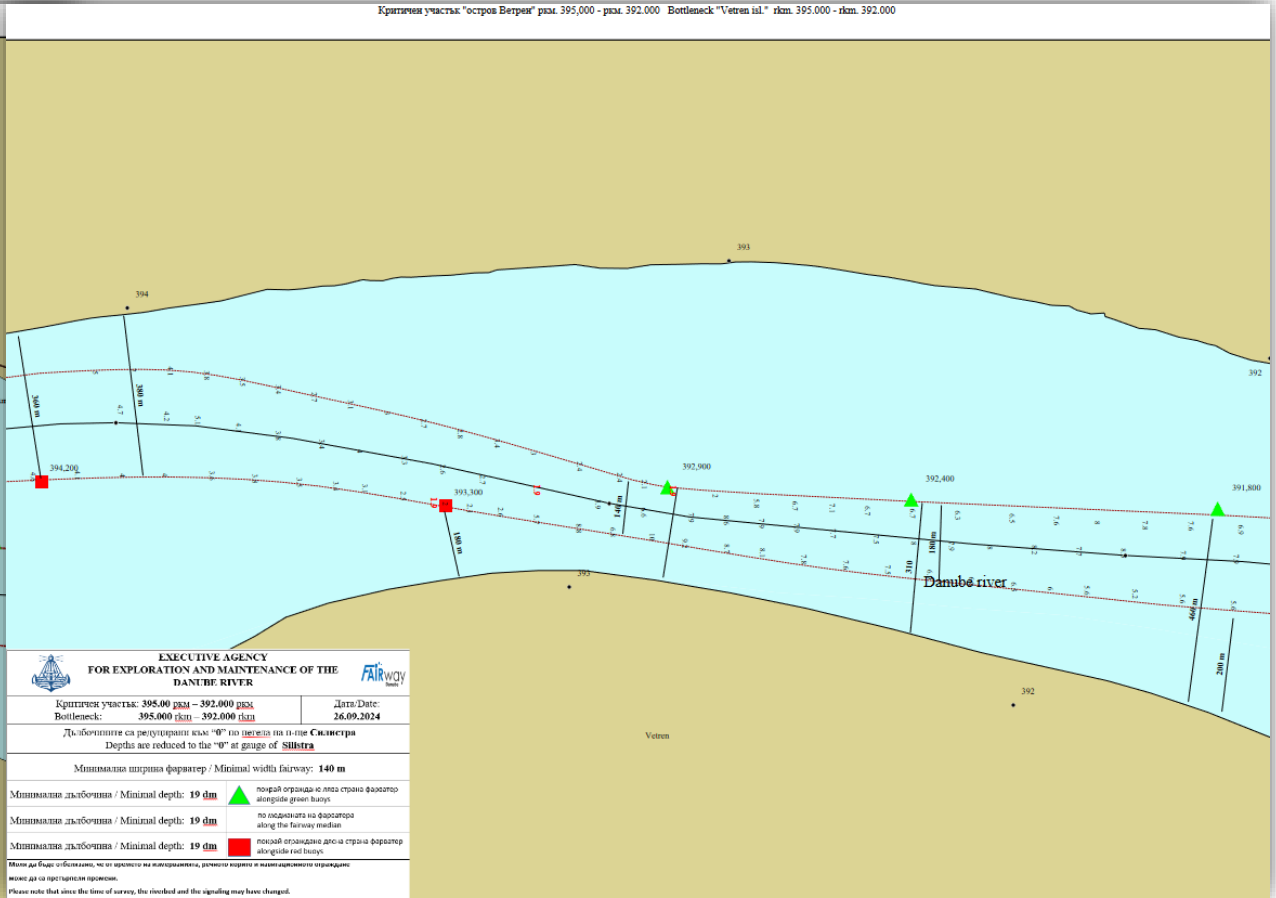
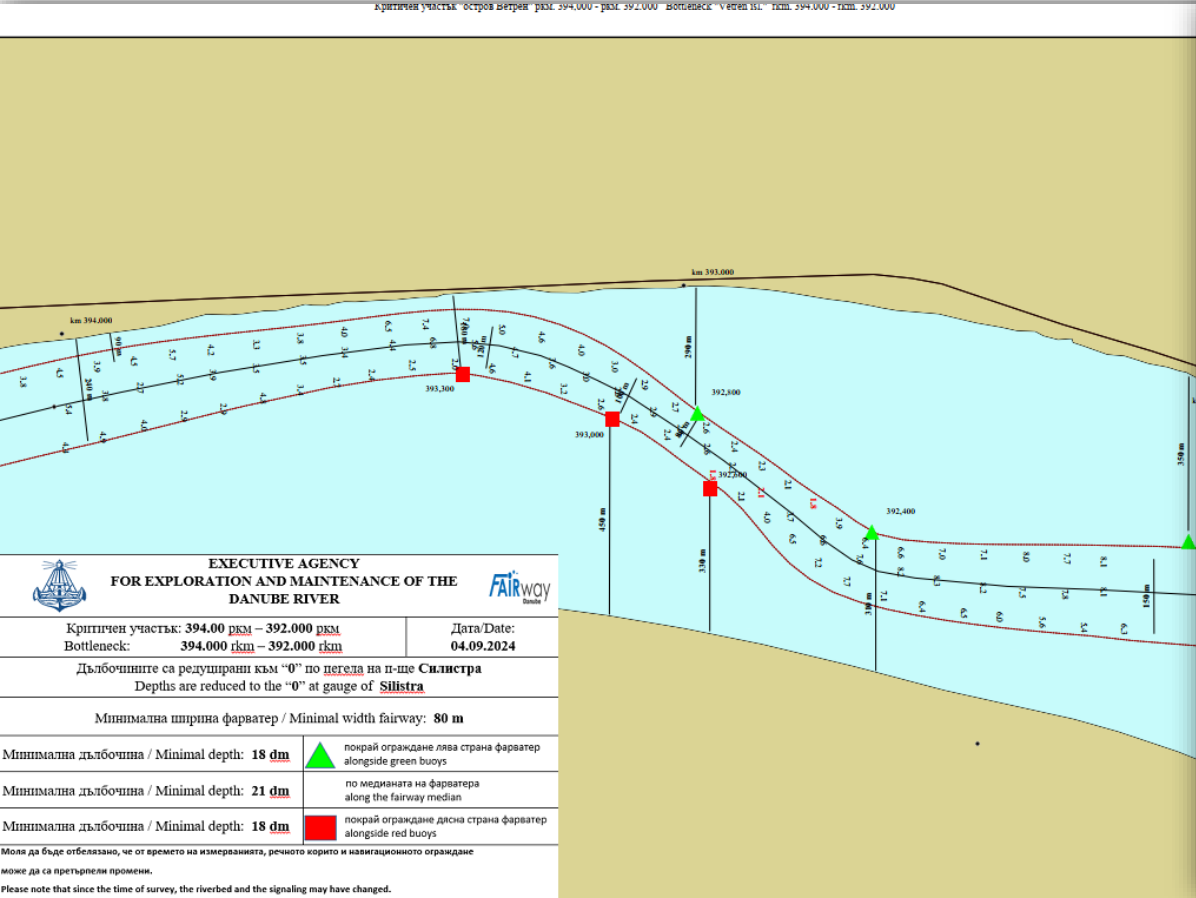


**EXECUTIVE AGENCY
FOR EXPLORATION AND MAINTENANCE OF THE DANUBE
RIVER**

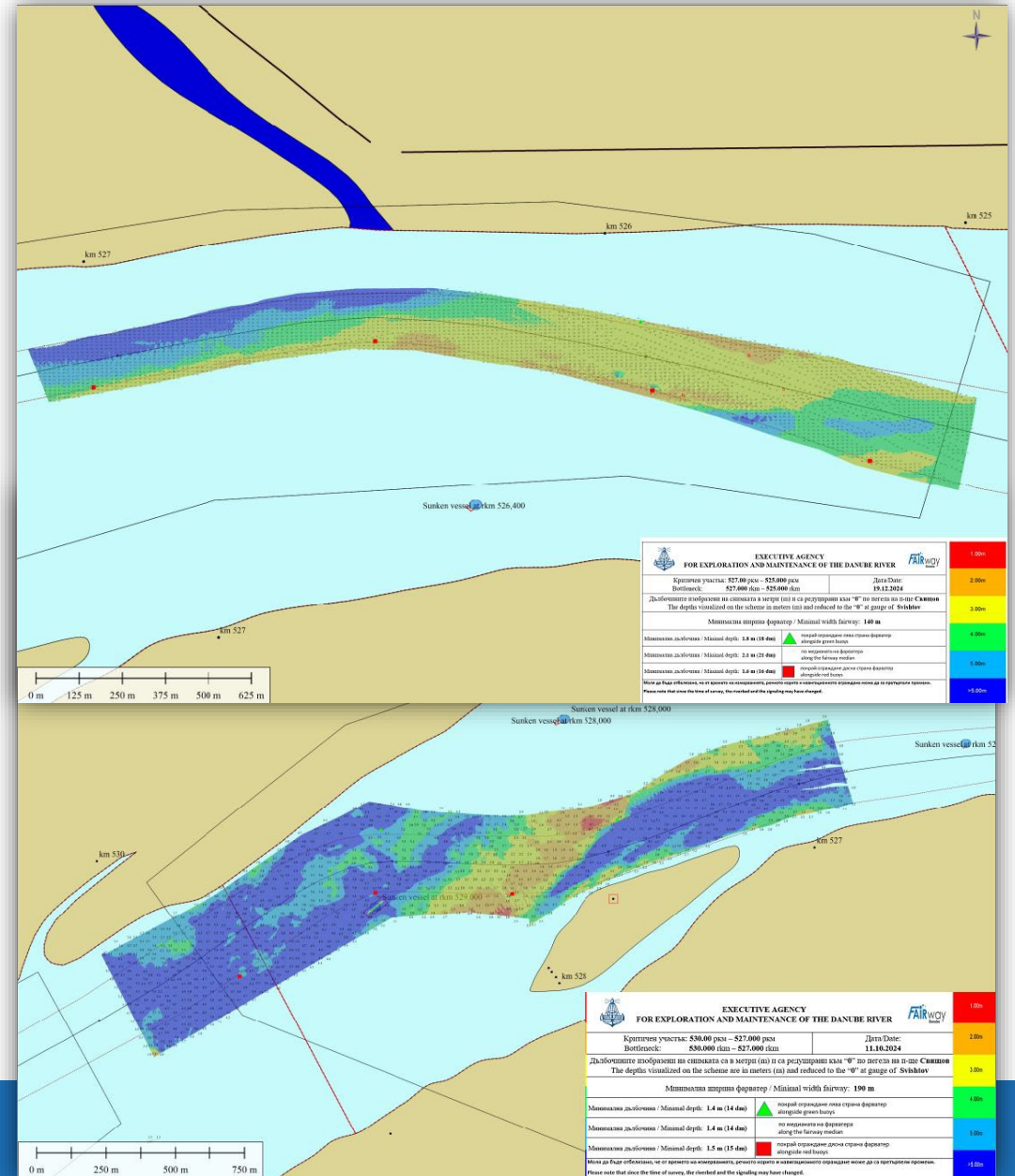
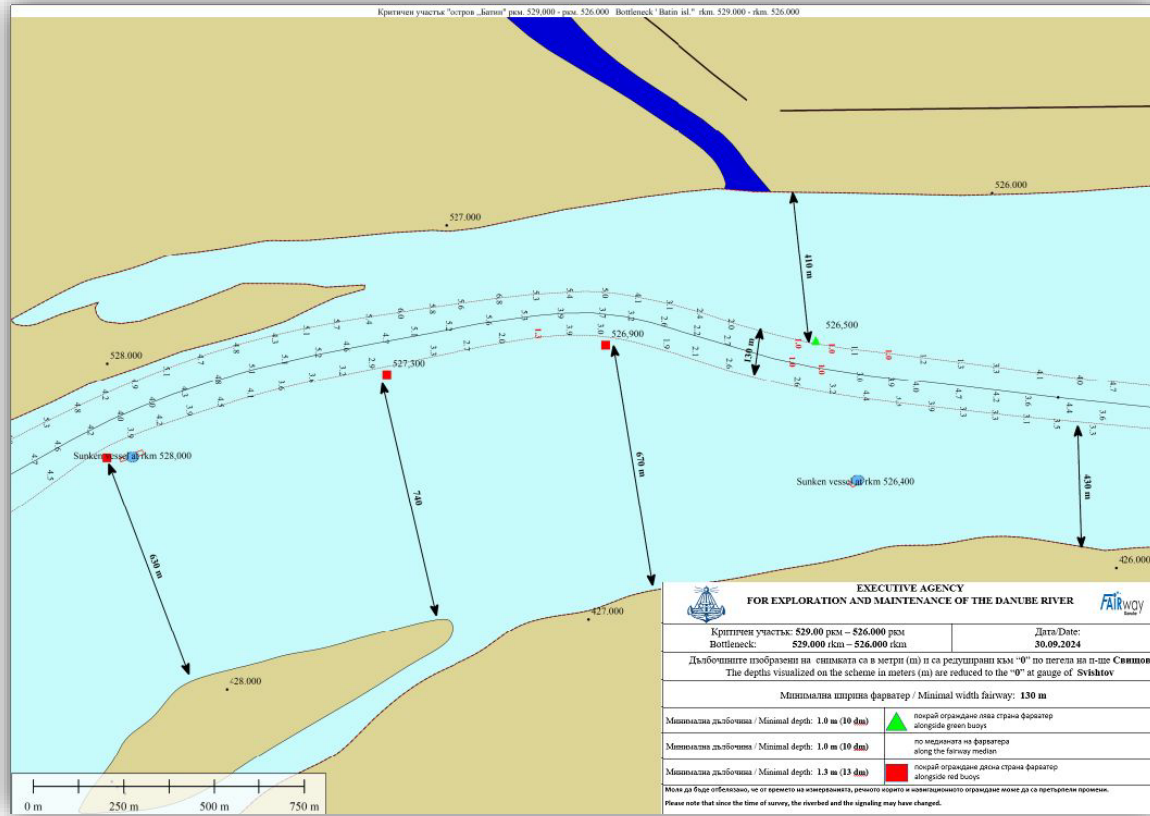
Критичен участък: 387.000 ркм – 385.000 ркм	Дата/Date: 04.09.2024	Мащаб / Scale: 1:25000
Bottleneck: 387.000 rkm – 385.000 rkm		
Дълбочините са редуцирани към "0" по нивела на п-ще Силистра Depths are reduced to the "0" at gauge of Silistra		
Минимална ширина фарватер / Minimal width fairway: 100 m		
Минимална дълбочина / Minimal depth: 23 dm	покрай оградане лева страна фарватер alongside green buoys	
Минимална дълбочина / Minimal depth: 23 dm	по медианата на фарватера along the fairway median	
Минимална дълбочина / Minimal depth: 21 dm	покрай оградане десна страна фарватер alongside red buoys	

Моля да бъде отбелязано, че от времето на измерванията, речното корито и навигационното оградане може да са претърпели промени.
Please note that since the time of survey, the riverbed and the signaling may have changed.

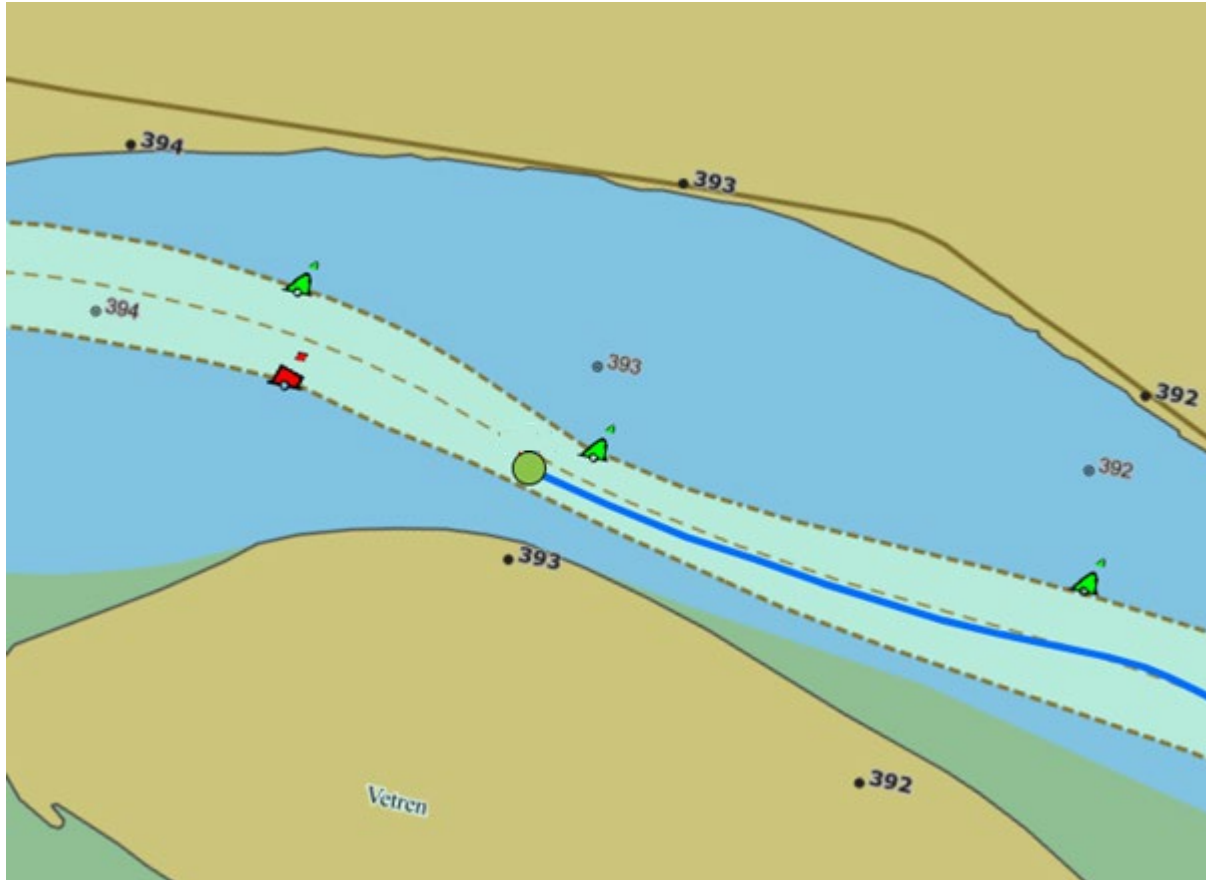
Fairway relocation at Vetren island (September 2024)



Fairway relocation at Batin island (October 2024)



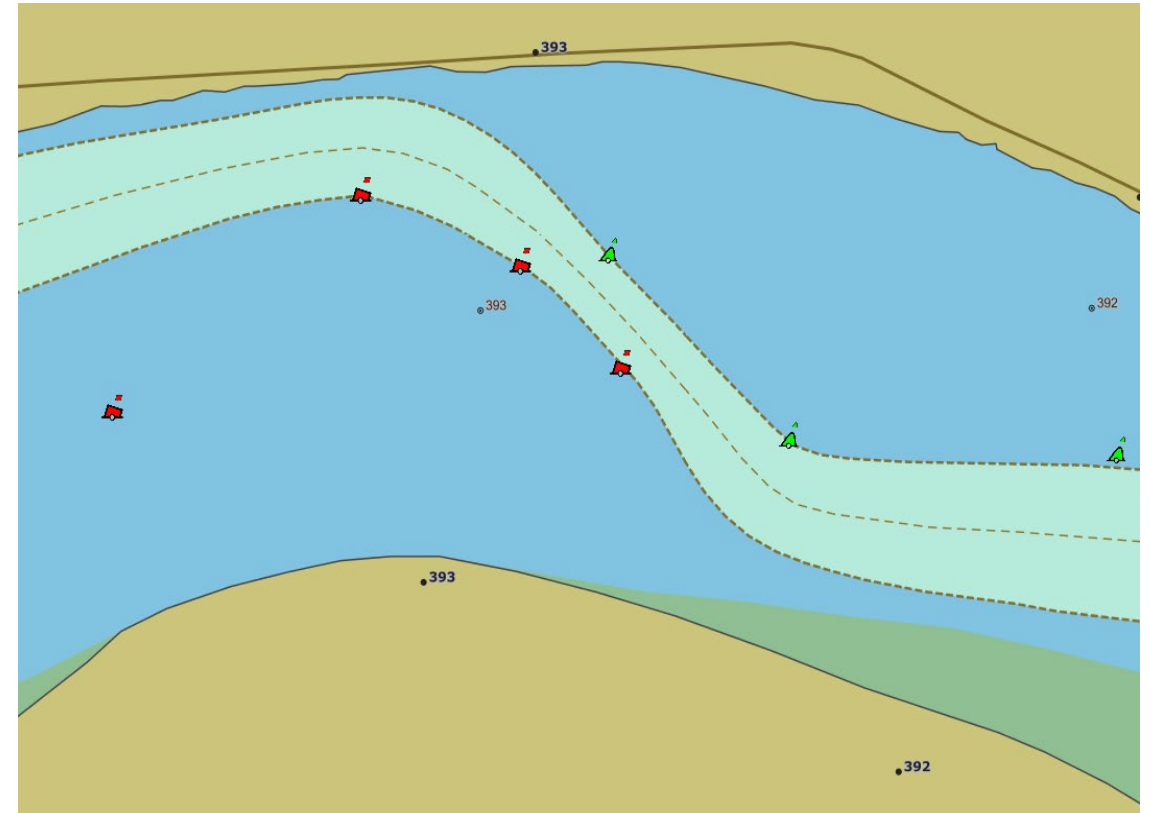
Stranded vessel on a sandbar



Sailing against the current with two loaded sections, a vessel ran aground in the middle of the fairway at km 393,000. The captain was explicitly warned about the minimum calculated depths for the day, for a critical section 395,000-392,000 (22dm), but he said that the maximum draught of his convoy was 23dm. When asked why he did not comply with the information from the operator on duty, he stated that according to the measurements from another vessel, the depth was 23dm. The fairway was closed.

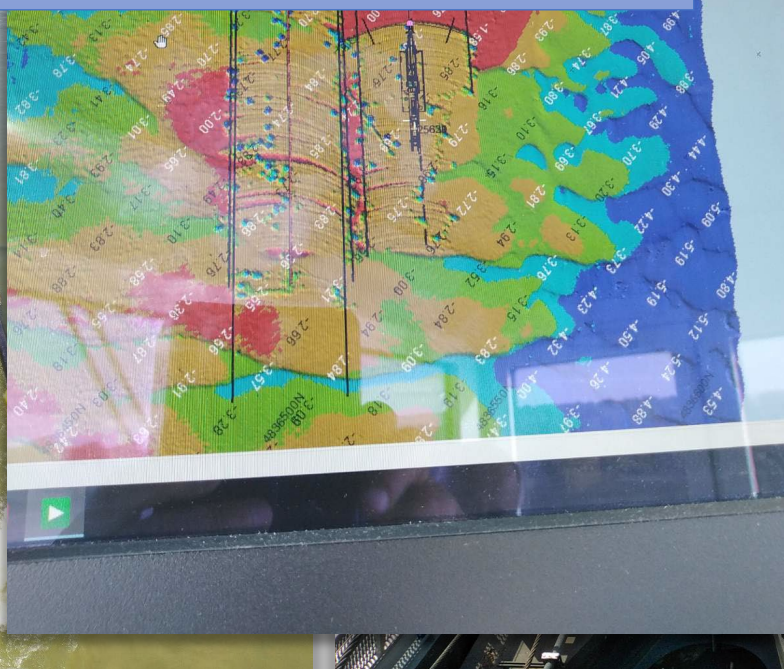
Stranded vessel on a sandbar

After the vessel ran aground, the next vessel passing through this section ran aground in the middle of the fairway at km 393,000, 117 m from the green buoy at km 392,900 and 577 m from the green buoy at 393,600. According to the information from the vessel's captain, its draught was 1.80 m and it encountered a sandbar with a depth of 1.4 m, and the minimum depth for the day in the area according to the information from the EAEMDR is 2.15 m. The vessel ran aground under its own efforts and continued its voyage against the current. This sandbar was formed as a result of the intensive morphological processes during the attempts to run aground by the first ship. After urgent intervention on our part, the fairway was changed.



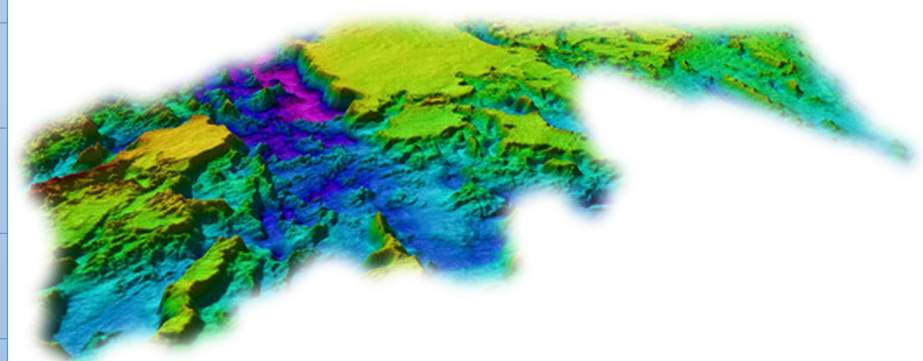


DREDGING WORKS



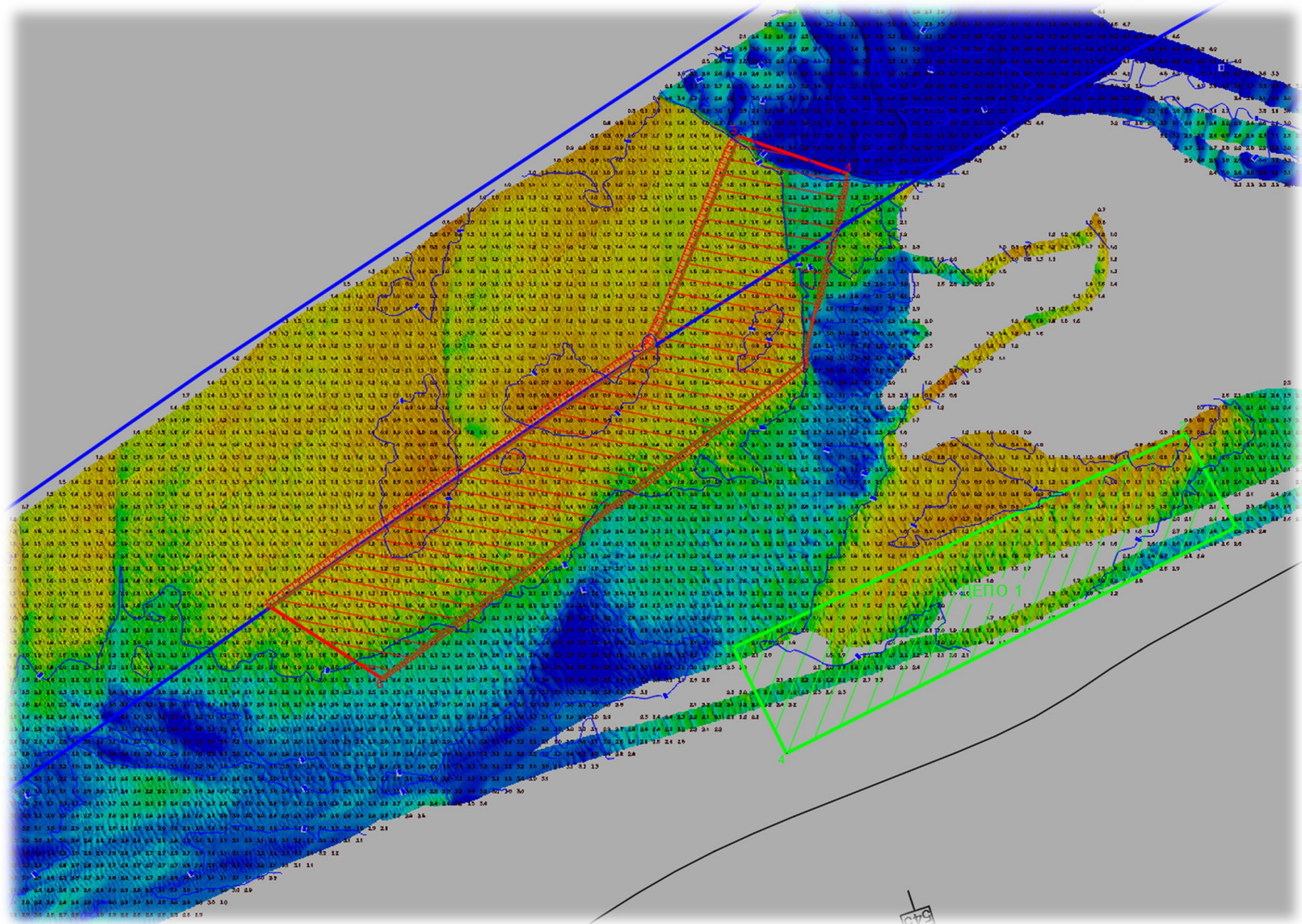
Dredging activities

From	To	Dredged quantity, m ³	Location
04.04.2024	14.04.2024	11876	km 544.900 - km 544.700
27.04.2024	06.06.2024	93198	km 545.400 - km 544.900
15.07.2024	29.07.2024	59407	km 545.300 - km 544.600
17.07.2024	04.08.2024	10587	km 531.100 - km 530.900
08.08.2024	12.08.2024	20076	km 609.100 - km 608.500
31.08.2024	03.09.2024	21777	km 526.900 - km 526.500
25.10.2024	01.11.2024	32235	km 528.500 - km 527.900
03.11.2024	07.11.2024	33524	km 564.000 - km 563.500
18.11.2024	21.11.2024	16739	km 543.200 - km 542.800

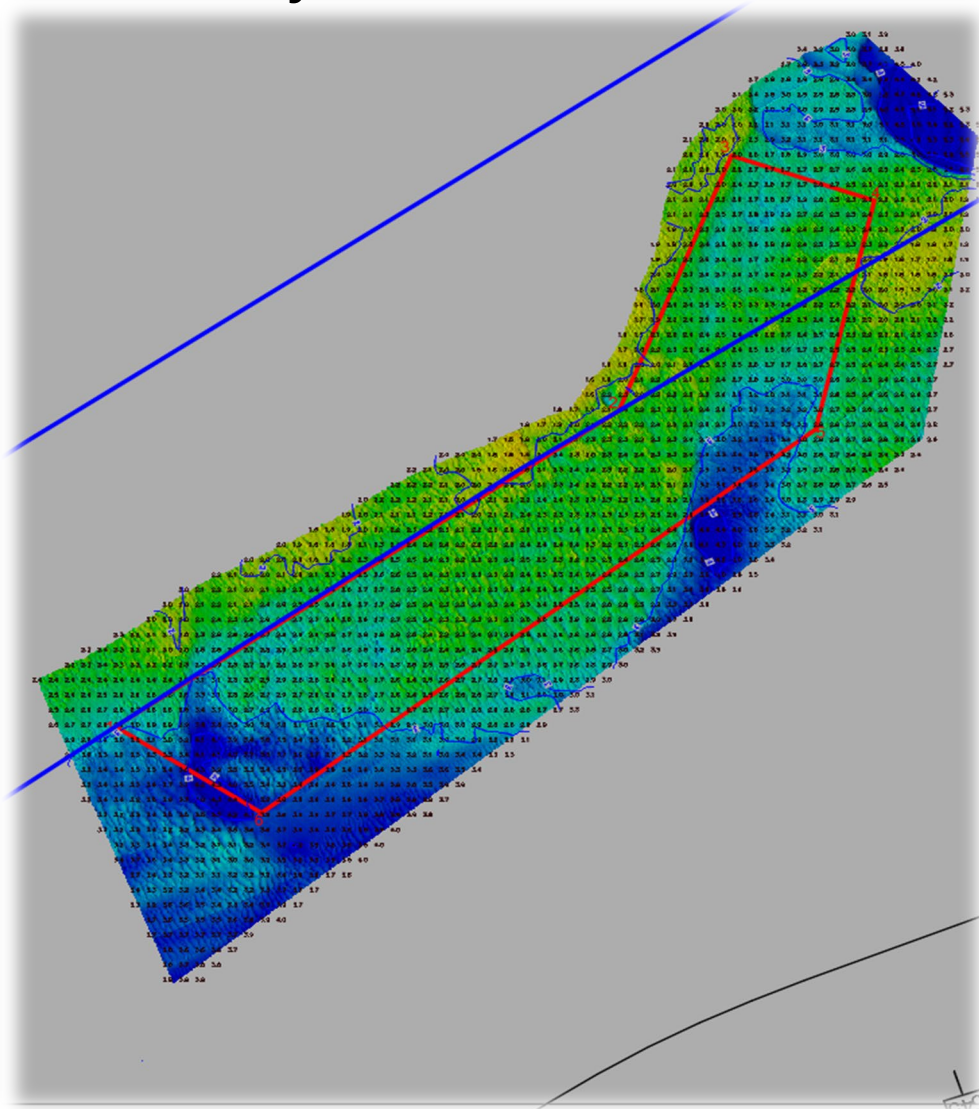


Total amount 299 419 m³
 276 956 m³ with hired equipment

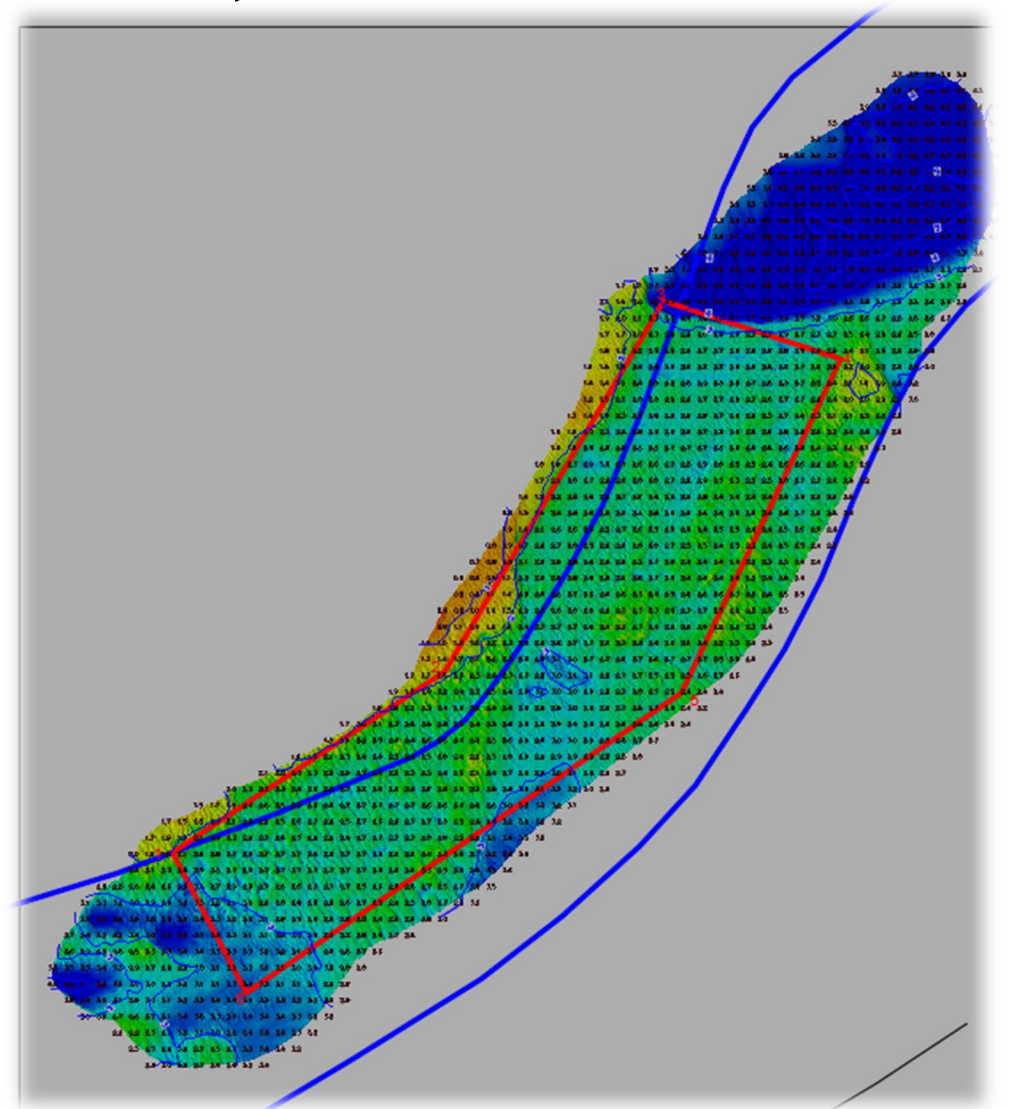
Vardim before dredging April 2024, km545



Vardim after dredging
May 2024, km545

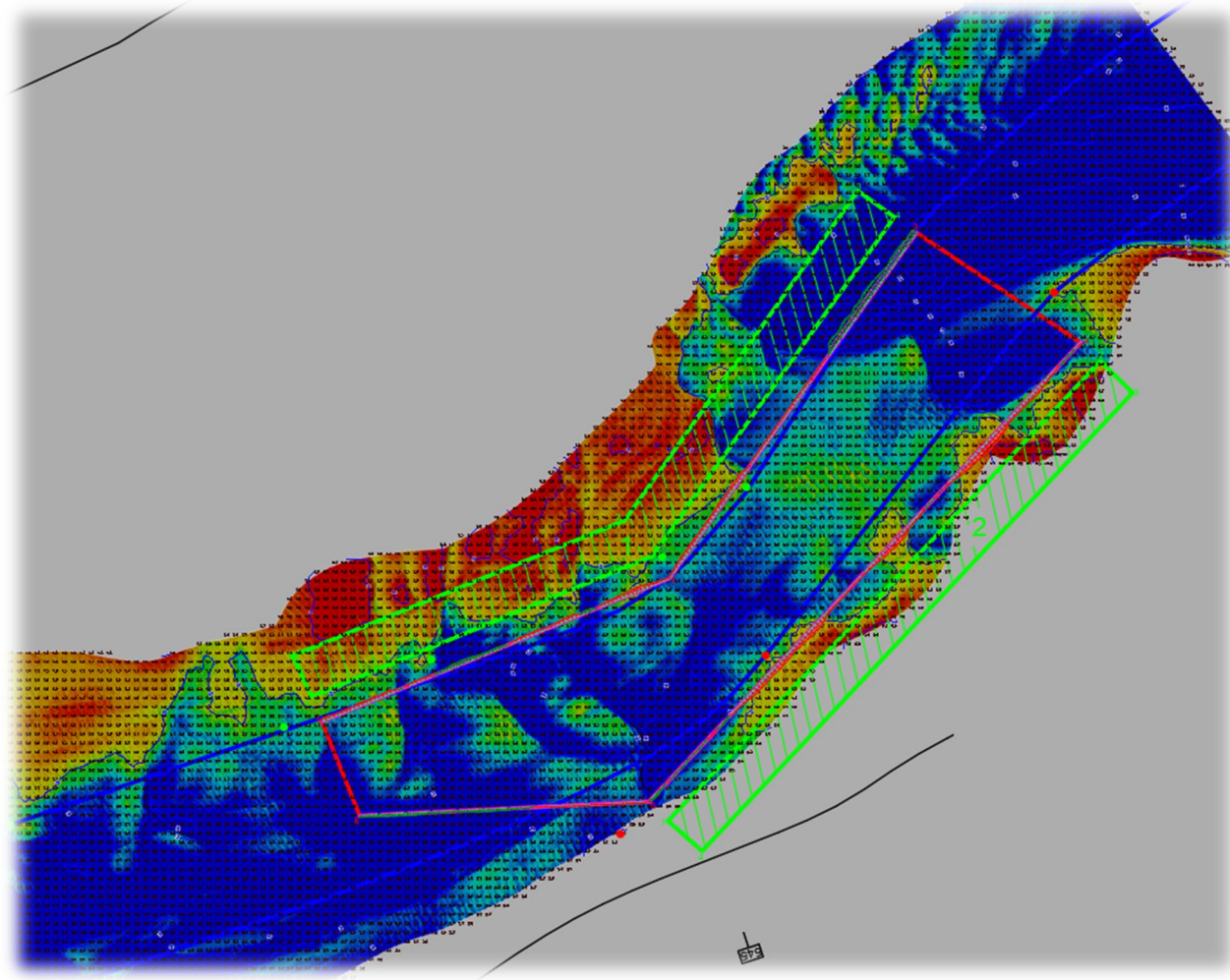


Vardim after dredging
June 2024, km545



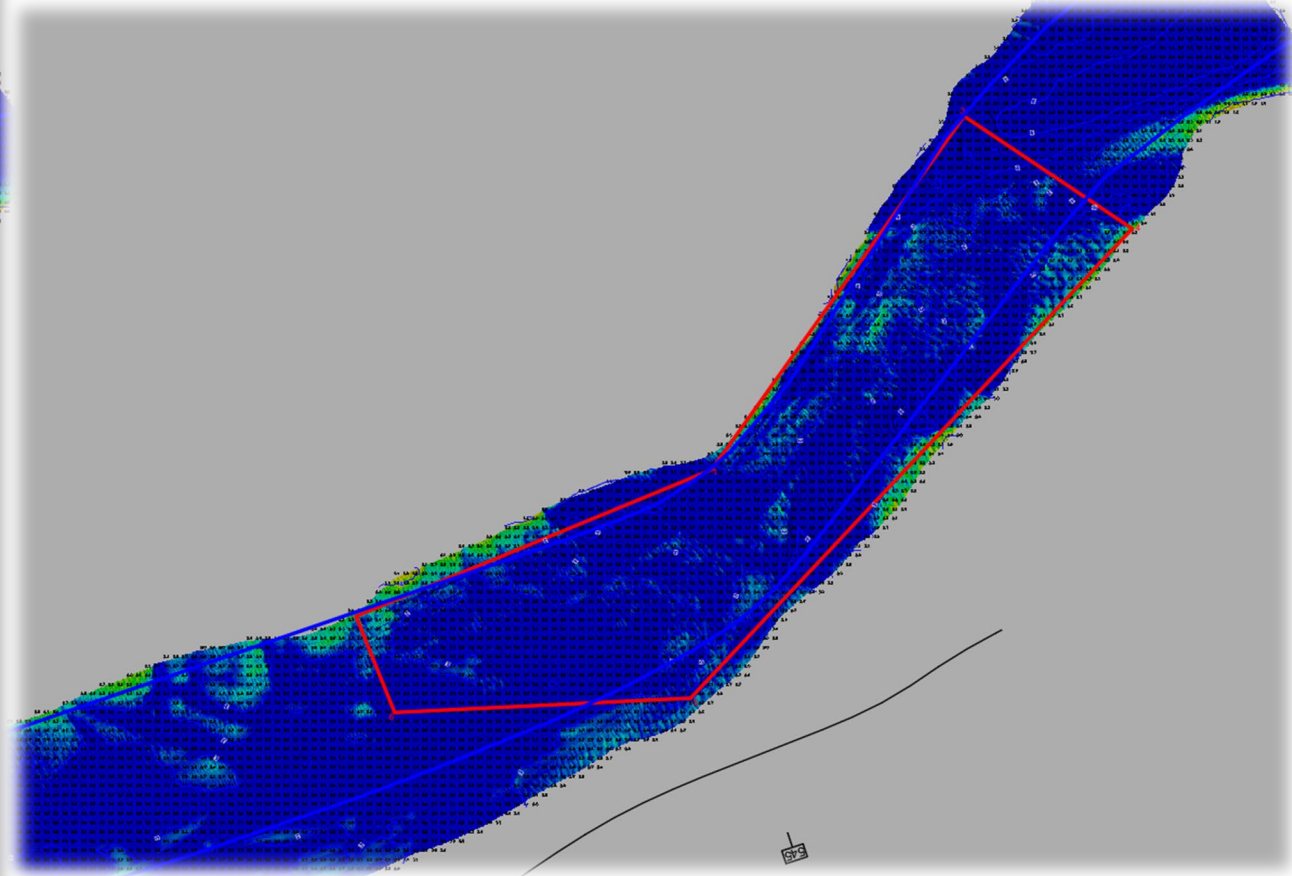
Vardim before dredging

June 2024, km545



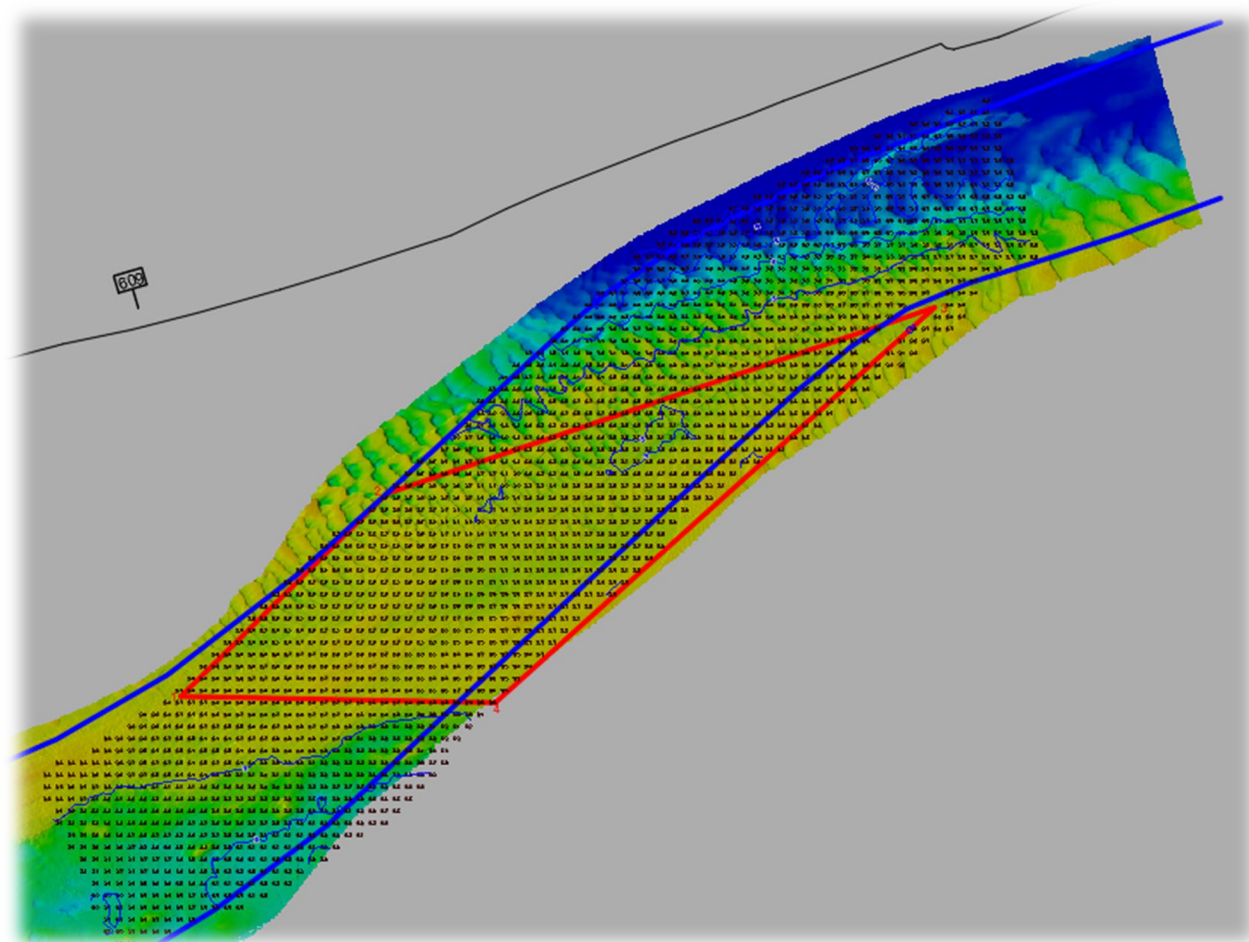
Vardim after dredging

July 2024, km545



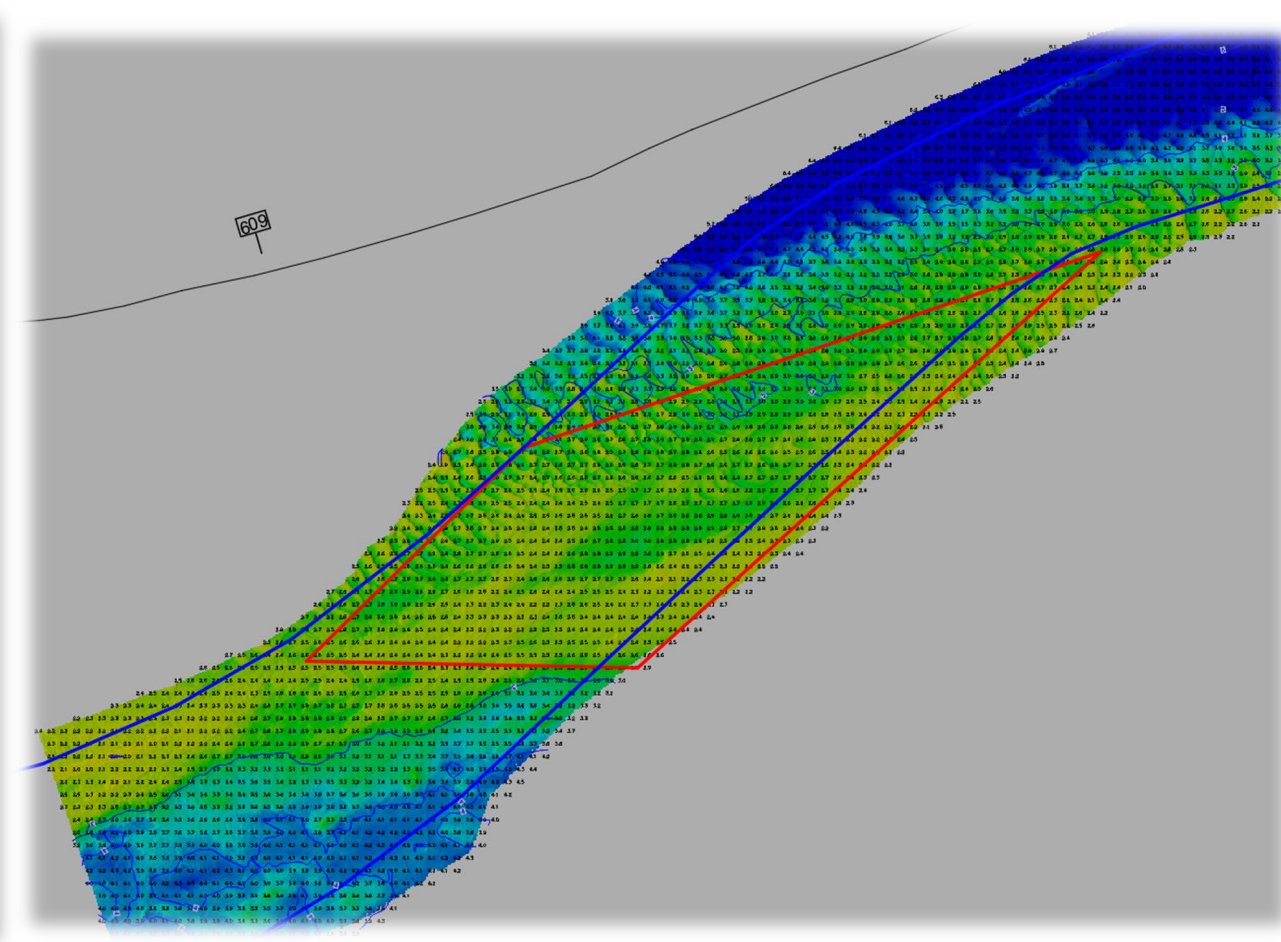
Somovit before dredging

August 2024, km609

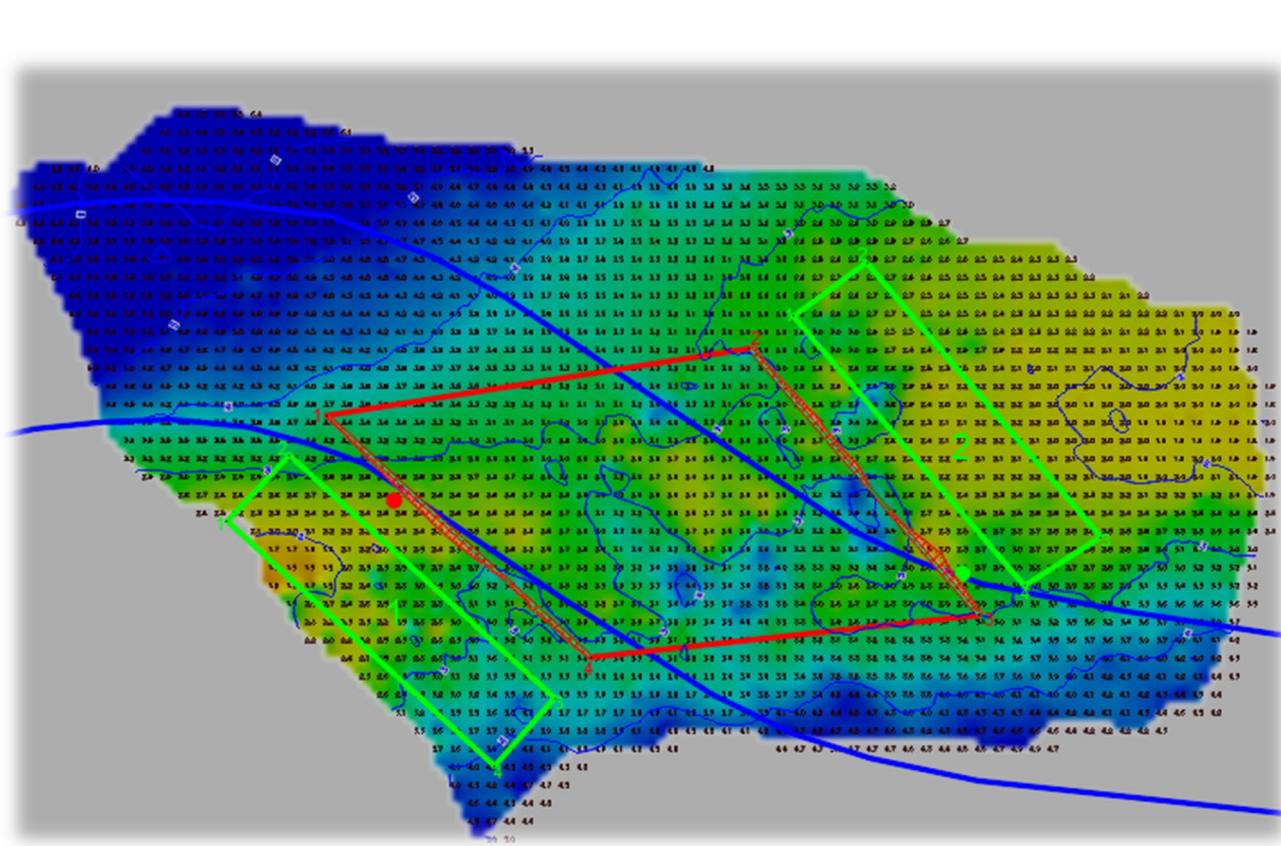


Somovit after dredging

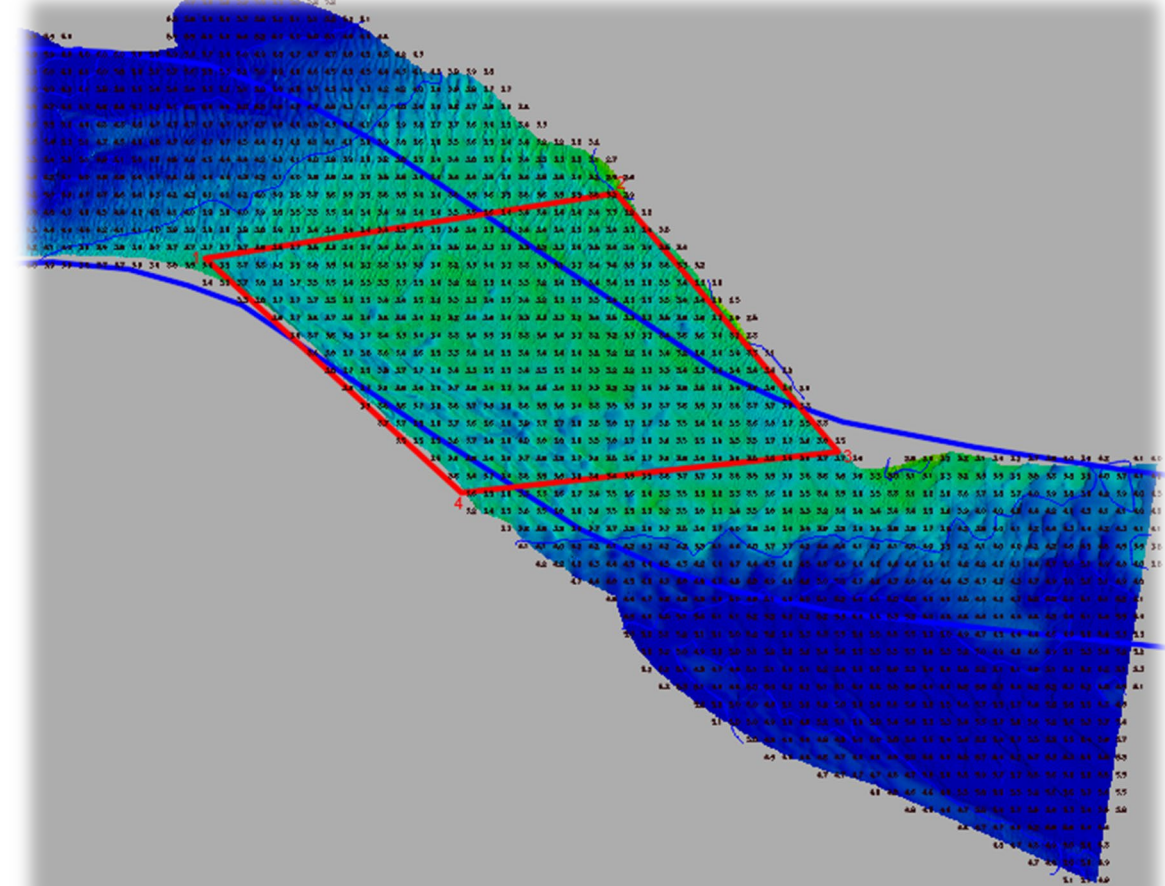
August 2024, km609



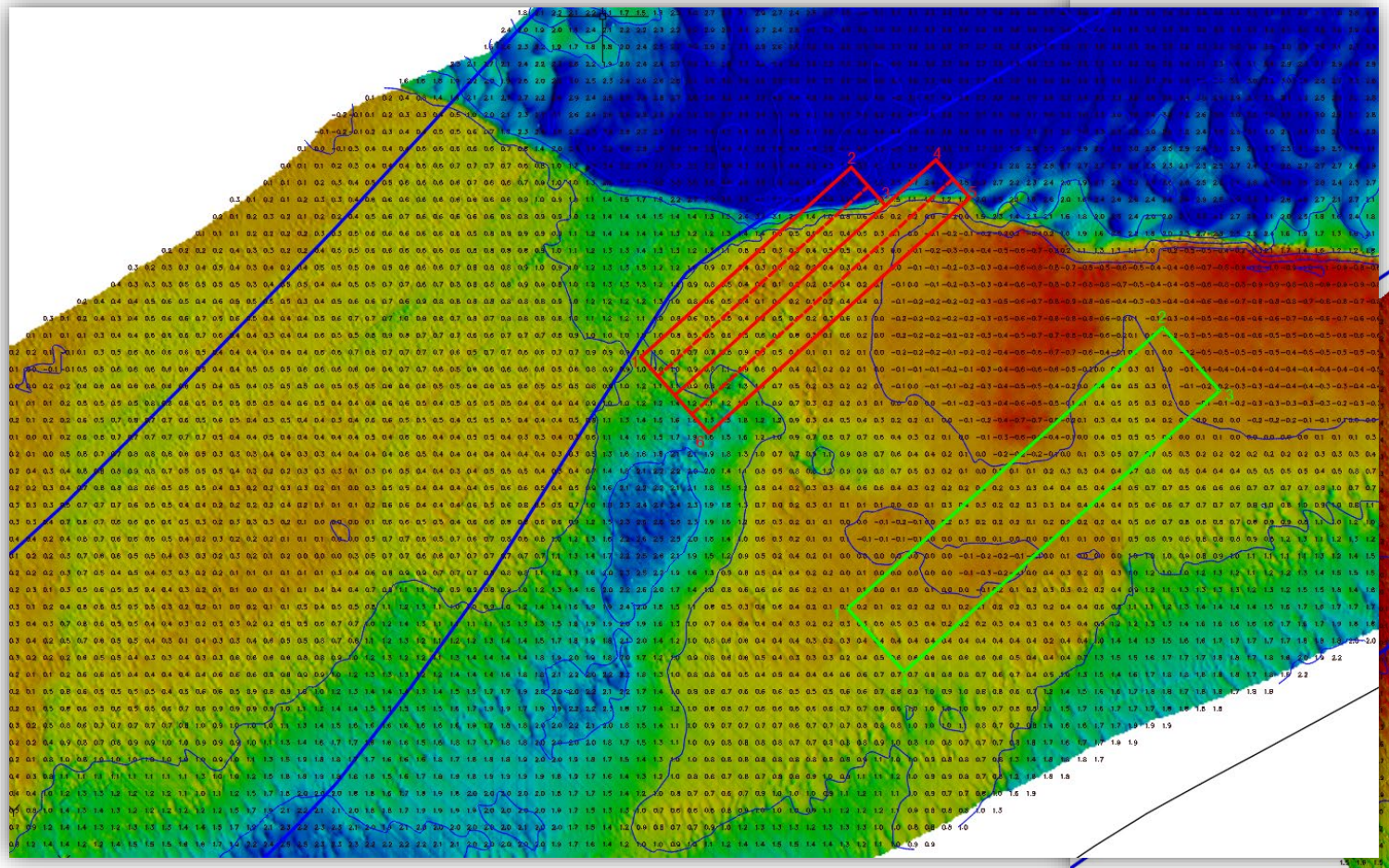
Batin before dredging
August 2024, km526



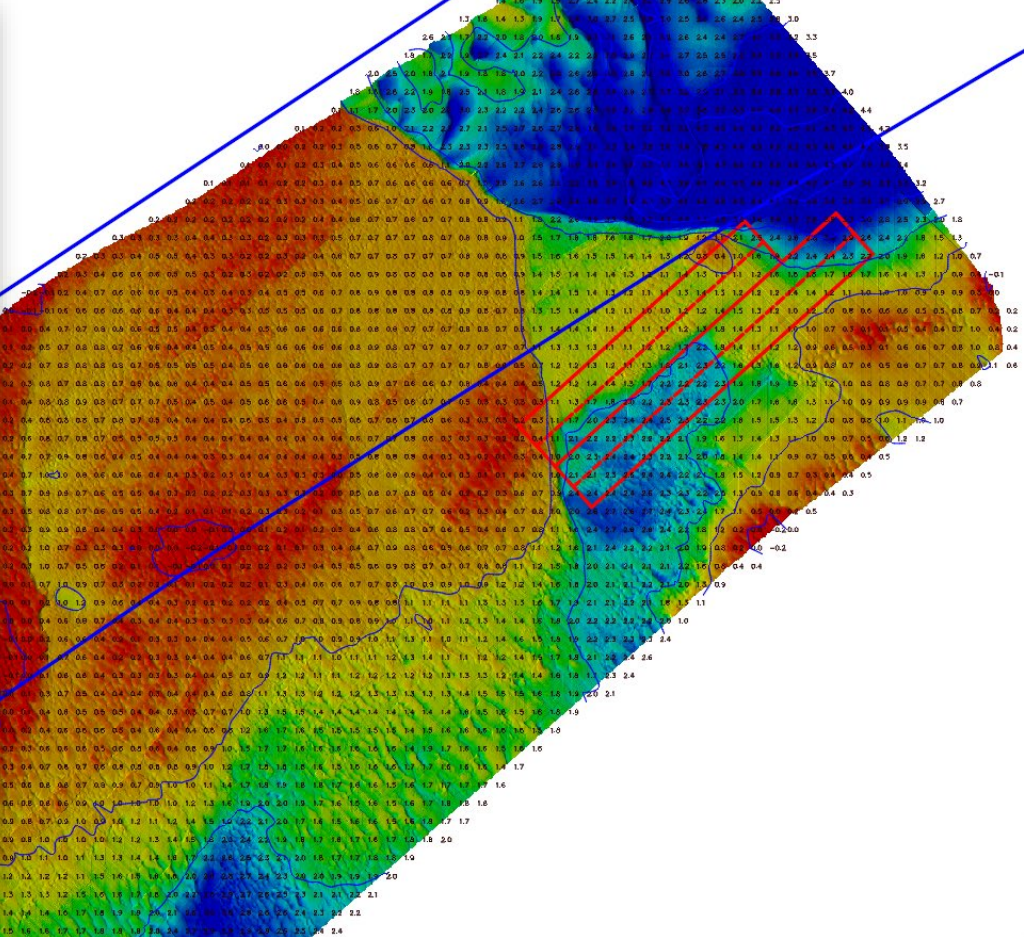
Batin after dredging
September, km526



Vardim before dredging
April 2024, km545

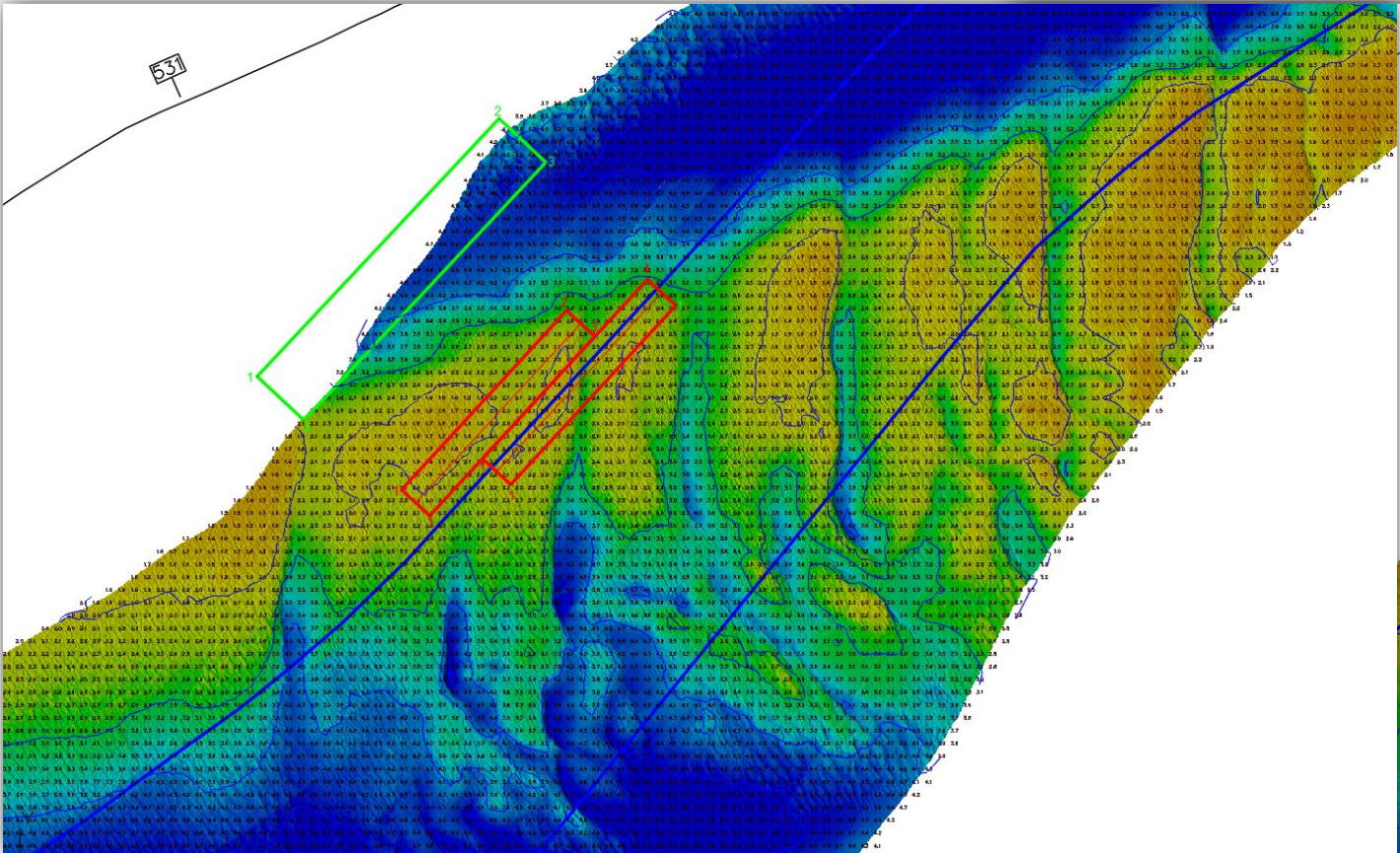


Vardim after dredging
April 2024, km545



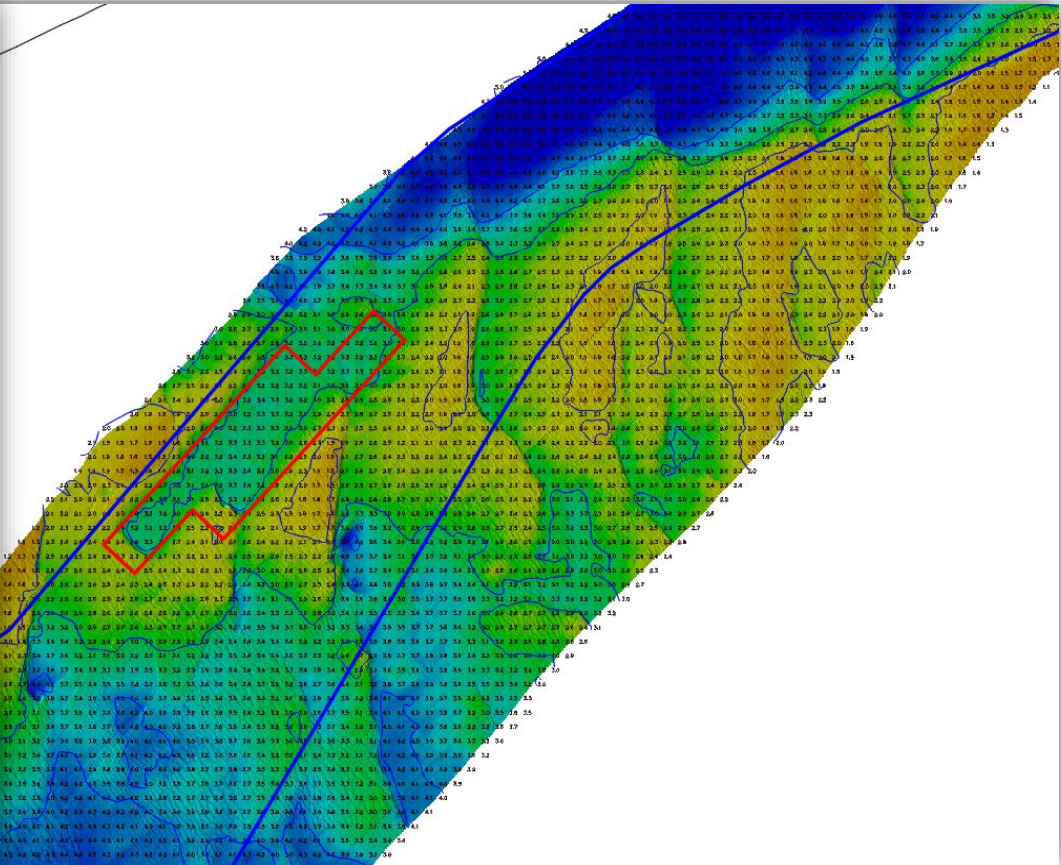
Batin before dredging

July 2024, km531



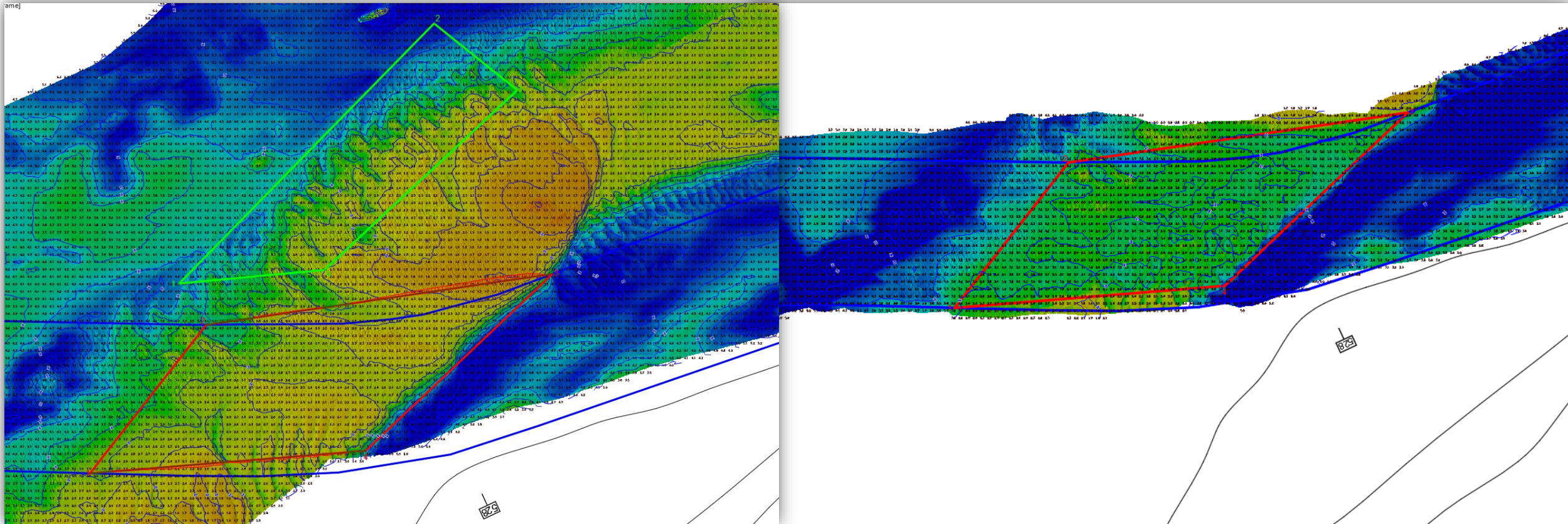
Batin after dredging

August 2024, km531

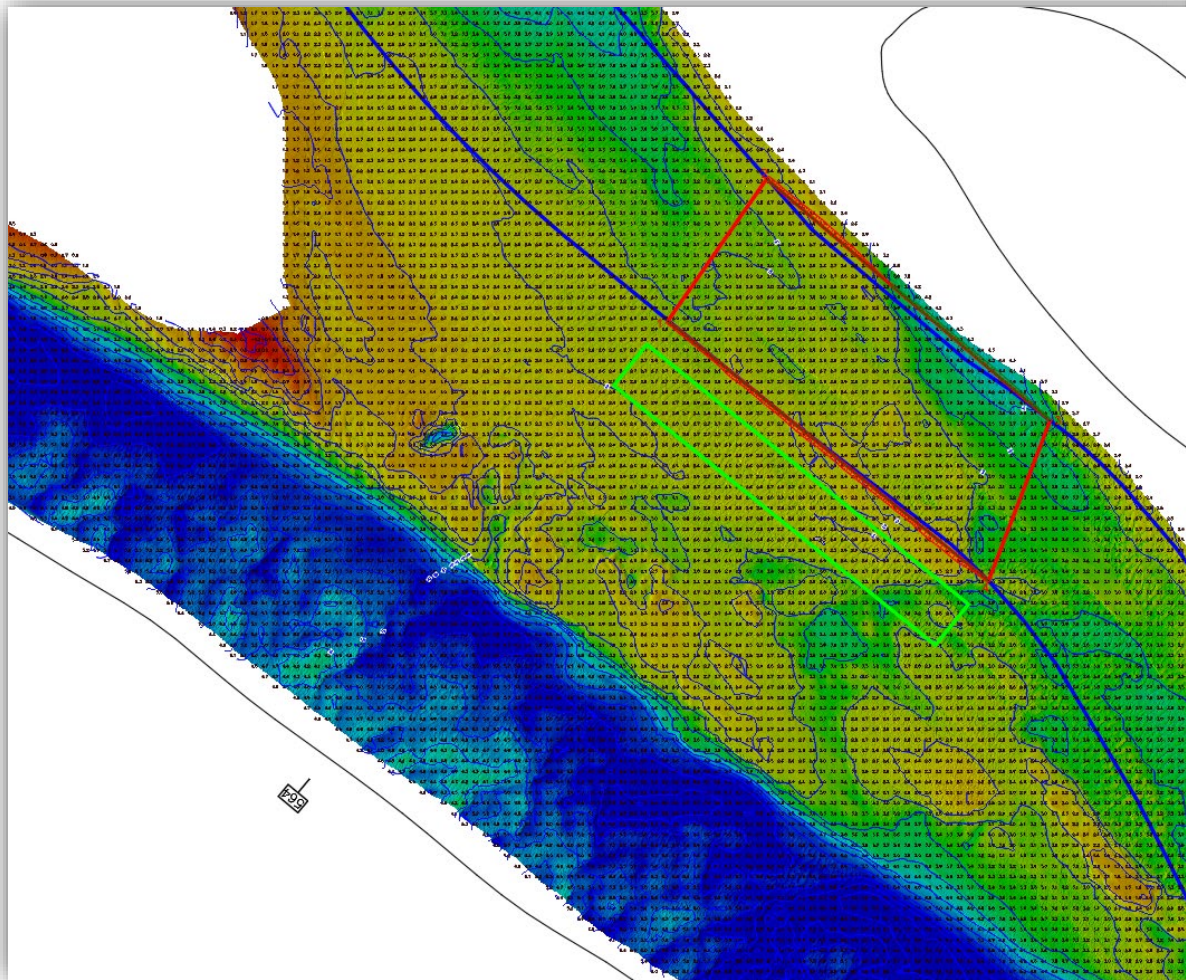


Batin before dredging
October 2024, km528

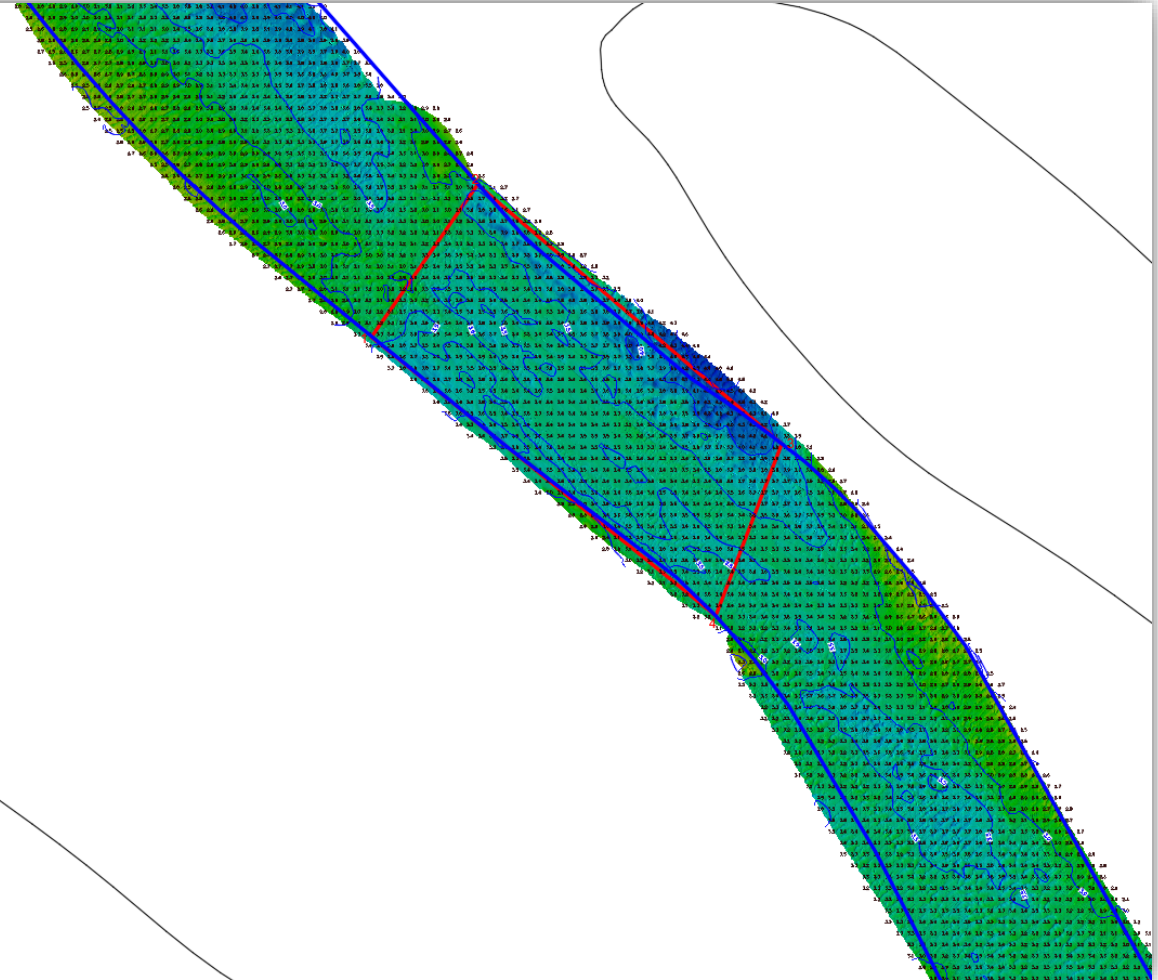
Batin after dredging
November 2024, km528



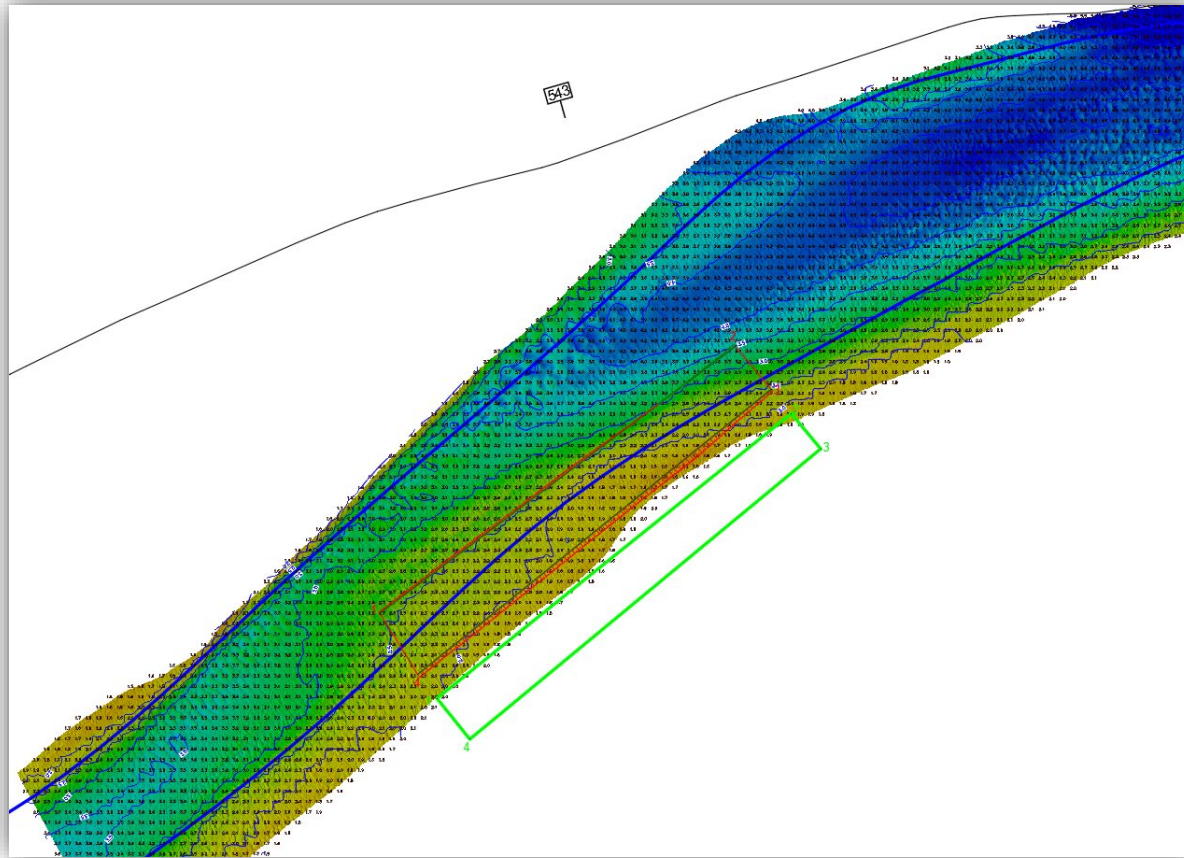
Belene before dredging
November 2024, km564



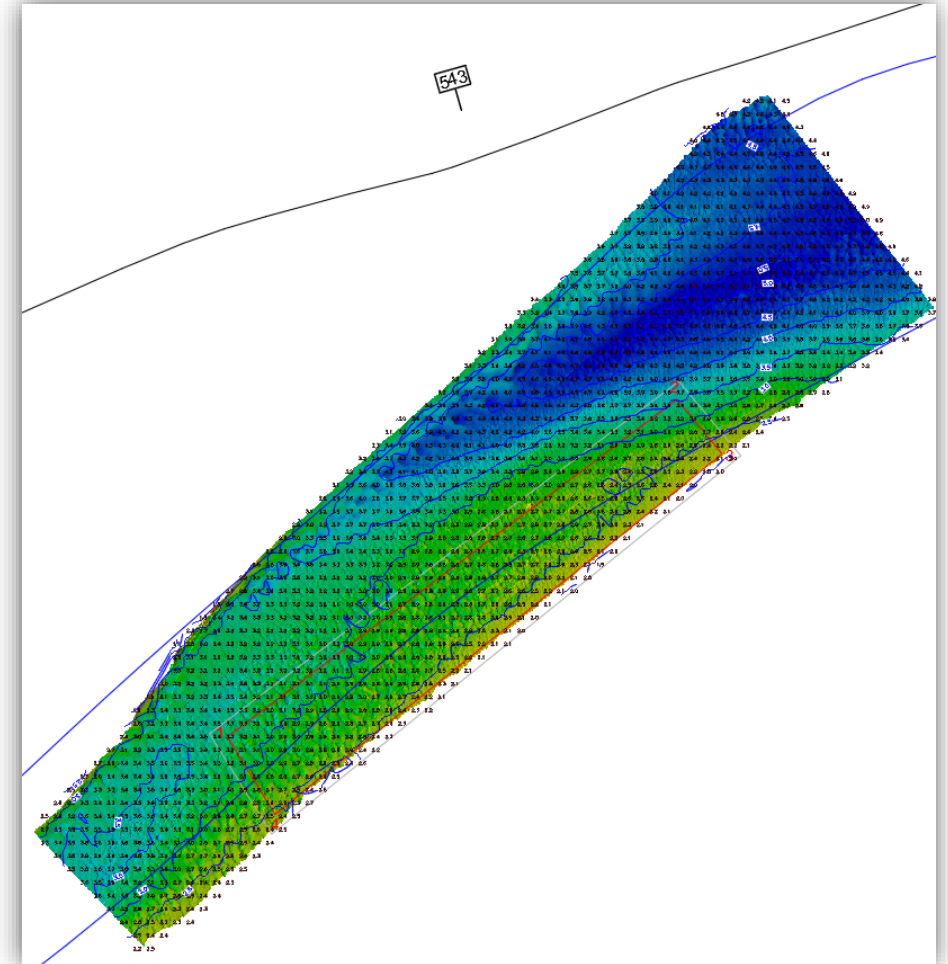
Belene after dredging
November 2024, km564



Vardim before dredging
November 2024, km543



Vardim after dredging
November 2024, km543



Planned fairway maintenance activities in 2025

Planned fairway maintenance activities in 2025

- In 2025, we plan dredging activities in the amount of about 300,000 m³ with a hired contractor and about 50,000 m³ with our own equipment.
- EAEMDR has a contract (with external contractor) for dredging activities that is in force until October 2025.
- Currently, we are at the stage of preparing the documentation for announcing a public procurement procedure for selecting a contractor to carry out the dredging activities after the expiration of the current contract.
- Financing for carrying out dredging activities has been secured from own budget.

Planned fairway maintenance activities in 2025

- The project scope of work for maintenance dredging in critical sections is based on data from the preliminary hydrographic surveys conducted. The project volumes are derived as estimated results of a mathematical analysis developed within the framework of the preliminary surveys, which tracked the processes in the riverbed after corrections were made to the critical sections.
- In May, a specific part of the most critical threshold section will be selected for dredging, as well as areas for depositing the dredged sediments. A dredging plan will be prepared for assignment to an external contractor.
- At this time, the most critical area is expected to be near Vardim Island at km 546,000 - 545,000, with the estimated amount of dredged material expected to be around 100,000 m³.

Planned fairway maintenance activities in 2025

- In June dredging activities are planned in the area of Belene Island at km 565.000 – 563.000 with an estimated amount of about 80,000 m³.
- Dredging activities are planned (with own equipment) at Batin Island (km 531) and at Vetren Island – (km 393.000 – 392.000) with a total estimated amount of about 50,000 m³.
- Other dredging sites will be selected when a limiting threshold appears, depending on the hydromorphological processes during the year. A potential one is near the town of Somovit at km 609, where regular measurements are planned to be carried out.

Dredging works will be performed only after analysis of bathymetric surveys, water level forecasts, water current data and meteorological forecasts in Upper and Middle Danube.

Potential bottlenecks to be dredged in 2024:

- Somovit (km610-km609);
- Belene (km577-km574.800);
 - Belene (km566-km562);
 - Batin (km523-km520);
 - Batin (km531-km529);
 - Batin (km526-km524);
- Bryshlan (km458-km455);
 - Vardim (km547-km546);
 - Vardim (km545-km543);
 - Vardim (km543-km540);
- Popina (km407-km404);
- Yantra (km538-km537)
- Vetren (km394-km392)

Km	Степен на важност 2024 г.	Бр. измервания годишно	март	април	май	юни	юли	август	септември	октомври
387.000 – 382.000		3	1		1		1			
396.000 – 392.000		2		1		1				
400.000 – 398.000		1					1			
408.000 – 403.000		3		1		1		1		
414.000 – 412.000		1			1					
423.000 – 421.000		2	1			1				
425.000 – 423.000		1						1		
428.000 – 425.000		1						1		
439.000 – 436.000		1								1
458.000 – 453.000		3	1		1		1			
463.000 – 460.000		2	1			1				
476.000 – 472.000		1		1						
490.000 – 487.000		2	1						1	
525.000 – 520.000		2		1		1				
529.000 – 527.000		2		1			1			
533.000 – 530.000		2		1			1			
539.000 – 536.000		2			1			1		
542.000 – 540.000		1						1		
545.000 – 542.000		5	1		1		1		1	1
547.000 – 545.000		5	1		1		1	1	1	1
556.000 – 554.000		1				1				
562.000 – 559.000		1		1				1		
565.000 – 563.000		6	1		1		1	1	1	1
576.000 – 573.000		3		1			1		1	
586.000 – 584.000		1				1				
591.000 – 589.000		1				1				
610.000 – 607.000		3				1			1	1
Зимовник и подход		2	1						1	
507.000 – 506.000 зимно уб.		1	1							
385.000 – 384.000 зимно уб.		1	1							
561.000 – 560.000 зимно уб.		1	1							
524.000 – 523.000 зимно уб.		1		1						
425.000 – 422.000 зимно уб.		1			1					
мост Видин - Калафат		1		1						

Hydrographic Measurement Schedule 2025 with multi-beam

(The kilometers are approximate and may be adjusted according to morphological changes in a given section and the degree of criticality in the current year.)

Studying the hydrological regime of the Danube River

Measurement of water discharge at the main hydrometric profiles	24
Water level measurement	3650
Water temperature measurement	2190
Velocity and water discharge measurement in island branches etc.	6
Velocity measurement in the area of the Ruse - Giurgiu bridge	2
Velocity measurement in the area of the Vidin-Calafat bridge	1
Coordination and exchange of measurement results in 2024 with AFDJ	2

Studying of the hydromorphological regime in the Bulgarian section of the Danube river

Hydrographic images of sunken vessels	1
Hydrographic images of mooring places	1
Hydrographic images of critical for navigation areas	60 km ²
Hydrographic images at the Ruse - Giurgiu bridge	2
Hydrographic images at the Vidin - Calafat bridge	1
Cross-profiles at the gauging stations	6
Mapping the outlines of coasts and islands	10 km
Hydrographic images at quarries for the extraction of alluvial deposits	1
Hydrographic images on island channels, natural winter harbors	5

Ensuring safe and unhindered navigation in the Bulgarian section of the Danube River

Issuance and dissemination of hydrological forecasts	365
Issuance and distribution of a hydrological and navigational newsletter	365
Storm warnings and notices to skippers	1500
Conducting and disseminating meteorological observations	24090

Ensuring safe and unhindered navigation in the Bulgarian section of the Danube River

Objective	Activity	Quantity
Marking the fairway with floating navigation signs	Field trips with up to two vessels in the direction of Ruse - Somovit and Ruse - Silistra for the maintenance of navigational conditions	With about 170 navigation buoys for the entire period
Maintenance of coastal signaling between the mouth of the Timok River and Silistra	Cleaning and rehabilitation of coastal signaling	Maintenance of 470 coastal km signs, 17 coastal lighthouses and other coastal navigation signs
Hydrographic images with a single-beam echo sounder	Taking current hydrographic images of the critical sections between Silistra and Somovit	Between 4 and 8 hydrographic images per trip
Publishing hydrographic images on the APPD website	Processing and publishing of the hydrographic images	Depending on the hydrographic images taken

Operating costs of the activity in 2024 and estimated budget for 2025

Areas	Operational expenditures 2024	Required operational budget 2025
Minimum fairway parameters (width/depth)	2 427 348	1 953 926
Surveying of the riverbed	104 267	119 642
Water level gauges, Information on water levels and forecasts, Meteorological information	92 682	106 349
Marking of the fairway	289 630	332 340
Other	34 756	39 880
Sum (Euro)	2 948 683	2 552 137

Thank you for your attention !

Ivelin Zanev

Executive Director, EAEMDR Bulgaria



EXECUTIVE AGENCY
EXPLORATION AND MAINTENANCE OF THE
DANUBE RIVER